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ENGINEERED
PERFORMANCE STANDARDS
Public Works Maintenance

HEATING, COOLING, VENTILATING HANDBOOK

NAVFAC P-704.0
ARMY TB 420-8
AIR FORCE AFM 85-44

APPROVED FOR PUBLIC RELEASE

DEPARTMENTS OF THE NAVY,
THE ARMY AND THE AIR FORCE

D 209.14:

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FOREWORD

This handbook provides guidance to Planners-Estimators in projecting labor hour requirements for workers to perform typical facilities maintenance tasks. Proper use of the data in this handbook will help provide more realistic, consistent, and timely labor hour estimates. These estimates provide bench marks which enable managers to evaluate and control actions based on improvement. More effective response and support at minimum cost can, in turn, be realized.

Comments and suggestions regarding the handbook are invited and should be sent to:

Director
NAVFAC Industrial Engineering Center (NIEC)
Atlantic Division
Naval Facilities Engineering Command
Norfolk, Virginia 23511

Telephone (804) 444-3324
or AUTOVON 690-3324

To facilitate forwarding of comments, addressed feedback forms are included in the back of this handbook.

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By Order of the Secretaries of the Army, the Navy, and the Air Force.

E. C. MEYER
General, United States Army
Chief of Staff

Official:

ROBERT M. JOYCE
Brigadier General, United States Army
The Adjutant General

W. M. ZOBEL
Rear Admiral, CEC, U.S. Navy
Commander, Naval Facilities
Engineering Command

Official:

JAMES L. WYATT, JR.
Colonel, USAF
Director of Administration

LEW ALLEN, JR.
General, USAF
Chief of Staff

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1. TB-420-2, NAVFAC P-701.0, EPS General Handbook 1

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CHAPTER 1. INTRODUCTION

1. Spread Sheets. The spread sheets on the following pages are arranged by task area. Overall information is shown at the top of each page with specific task data listed down the left hand side. Various tasks, with times measured using industrial engineering techniques, are displayed on the spread sheets to provide guidance in choosing the correct group time. A more complete description of each task is provided in Chapter 3, TASK TIMES.

2. Task Times. The task times are listed numerically and the reference numbers correpond with those shown on the spread sheets or tabular listings. The task times show the operations that were combined to develop the various tasks. More detailed developmental data supporting the operation times is maintained by the NAVFAC Industrial Engineering Center.

3. General Information. Labor hour estimates obtained from spread sheets in this handbook do not include time for staging required materials at the job site. Ancillary activities, such as this type of material handling, can be estimated using data in the General Handbook (TB 420-2, NAVFAC P-701.0) as guidance. Allowances, travel time and job preparation time are additionally covered in the General Handbook. Engineered Performance Standards (EPS) should only be applied by personnel who have attended an EPS training course.

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CHAPTER 2

SPREAD SHEETS

Section 1. Cooling, Ventilating

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TASK AREA Air conditioning units - annual maintenance

Tasks Include: (1) Shell and tube water-cooled condenser - drain and fill, remove and install end plates, punch and clean tubes, fabricate and install gaskets.
(2) All other units - clean, inspect, adjust, lubricate bearings, change oil and filter as appropriate.

NOTE: For seasonal and continuous operating systems.

		DESCRIPTION	GROUP E Craft 1.8 Time hrs.	GROUP F Craft 2.9 Time hrs.	GROUP G Craft 4.4 Time hrs.	GROUP H Craft 6.0 Time hrs.	NOTE
AIR HANDLER	HEATING AND COOLING	3-24 tons (per unit) VT-51	1	2	3	4	over 4 use 1.677 hrs. per unit
		25-99 tons (per unit) VT-55			1		over 1 use 4.318 hrs. per unit
		100-250 tons (per unit) VT-58					use 10.431 hrs. per unit
	COOLING ONLY	3-24 tons (per unit) VT-49	1	2	3	4-5	over 5 use 1.372 hrs. per unit
		25-99 tons (per unit) VT-52		1		2	over 2 use 3.085 hrs. per unit
		100-250 tons (per unit) VT-57				1	over 1 use 6.869 hrs. per unit
	COMPRESSOR	3-24 tons (per unit) VT-50	1		2	3	over 3 use 1.912 hrs. per unit
		over 100 tons (per unit) VT-53				1	over 1 use 5.423 hrs. per unit
CONDENSER	SHELL AND TUBE - WATER COOLED	100-200 tons (per unit) VT-25			1		over 1 use 5.070 hrs. per unit
		300-400 tons (per unit) VT-28					use 8.629 hrs. per unit
		700-800 tons (per unit) VT-66					use 14.723 hrs. per unit

TASK AREA: Air conditioning units - annual maintenance

TASK AREA Air conditioning units - annual maintenance

Tasks Include: (1) Shell and tube water-cooled condenser - drain and fill, remove and install end plates, punch and clean tubes, fabricate and install gaskets.
(2) All other units - clean, inspect, adjust, lubricate bearings, change oil and filter as appropriate.

NOTE: For seasonal and continuous operating systems.

		DESCRIPTION		GROUP E Craft Time 1.8 hrs.	GROUP F Craft Time 2.9 hrs.	GROUP G Craft Time 4.4 hrs.	GROUP H Craft Time 6.0 hrs.	NOTE
CONDENSER	EVAPORATIVE-AIR-COOLED	3-9 tons (per unit)	VT-56	1		2	3	over 3 use 2.002 hrs. per unit
		25-49 tons (per unit)	VT-61			1		over 1 use 4.899 hrs. per unit
		100-199 tons (per unit)	VT-63					use 8.987 hrs. per unit
		3-24 tons (per unit)	VT-62	2 (for 1 unit use Group D, 1.1 hrs.)	3	4-5	6-7	over 7 use .939 hrs. per unit
		25-49 tons (per unit)	VT-64		1	2	3	over 3 use 2.289 hrs. per unit
COOLING TOWER	WOOD	25-99 tons (per unit)	VT-54	1		2	3	over 3 use 2.115 hrs. per unit
		800-999 tons (per unit)	VT-59					use 10.385 hrs. per unit
	METAL	3-9 tons (per unit)	VT-56	1		2	3	over 3 use 2.002 hrs. per unit
		25-49 tons (per unit)	VT-61			1		over 1 use 4.899 hrs. per unit
		100-199 tons (per unit)	VT-63					use 8.987 hrs. per unit
PACKAGE-TYPE/SELF-CONTAINED		3-49 tons (per unit)	VT-46		1		2	over 2 use 3.398 hrs. per unit
WINDOW		All sizes (per unit)	VT-43	2 (for 1 unit use Group D, 1.1 hrs.)	3	4-5	6-7	over 7 use .913 hrs. per unit

TASK AREA Air conditioning units - annual maintenance

TASK AREA: Air conditioning units - recurring maintenance

Tasks Include: Remove and install access panel(s), clean, inspect, lubricate, add oil, make adjustments, change filters and fill out inspection report.

NOTE: To perform this maintenance requires minimum system shutdown.

DESCRIPTION			GROUP C Craft Time 0.6 hrs.	GROUP D Craft Time 1.1 hrs.	GROUP E Craft Time 1.8 hrs.	GROUP F Craft Time 2.9 hrs.	NOTE
AIR HANDLER		3-24 tons (per unit) VT-38	1	2	3	4-6	over 6 use .566 hrs. per unit
		25-250 tons (per unit) VT-60		1	2	3	over 3 use 1.028 hrs. per unit
COMPRESSOR/CONDENSER	PACKAGE-TYPE	3-9 tons (per unit) VT-41	1		2	3-4	over 4 use .735 hrs. per unit
	OPEN (CENTRAL COMPRESSION) SYSTEM	3-24 tons (per unit) VT-42	1		2	3-4	over 4 use .781 hrs. per unit
		25 tons and over (per unit) VT-44		1	2	3	over 3 use .989 hrs. per unit
	AIR-COOLED	All sizes (per fan assembly) VT-39	1	2	3	4-5	over 5 use .618 hrs. per fan assembly
	EVAPORATIVE	25 tons and over (per unit) VT-45		1	2	3	over 3 use 1.094 hrs. per unit
COOLING TOWER	WOOD	25-99 tons (per unit) VT-47	1		2	3-4	over 4 use .736 hrs. per unit
		500-999 tons (per unit) VT-48				1	over 1 use 2.219 hrs. per unit
	METAL	3-24 tons (per unit) VT-40	1	2	3	4-5	over 5 use .678 hrs. per unit
		25 tons and over (per unit) VT-45		1	2	3	over 3 use 1.094 hrs. per unit
PACKAGE-TYPE/ SELF-CONTAINED		3-9 tons (per unit) VT-41	1		2	3-4	over 4 use .735 hrs. per unit
		10-49 tons (per unit) VT-37		1		2	over 2 use 1.207 hrs. per unit
WINDOW		All sizes (per unit) VT-36	2-3 (for 1 unit use Group B, 0.3 hrs.)	4-5	6-8	9-14	over 14 use .247 hrs. per unit

TASK AREA: Air conditioning units - recurring maintenance

TASK AREA: Air conditioning units - seasonal shutdown

Tasks Include: Remove and install panel, sensory inspect bearings, turn off power, fill out inspection report, pump down and drain tank as appropriate.

DESCRIPTION			GROUP B Craft Time 0.3 hrs.	GROUP C Craft Time 0.6 hrs.	GROUP D Craft Time 1.1 hrs.	GROUP E Craft Time 1.8 hrs.	NOTE
AIR HANDLER		Cooling only All sizes (per unit) VT-26		1	2	3-4	over 4 use .470 hrs. per unit
COMPRESSOR OPEN (CENTRAL COMPRESSION) SYSTEM		All sizes (per unit) VT-27		1	2	3-4	over 4 use .497 hrs. per unit
CONDENSER	EVAPORATIVE (COOLING ONLY)	100-199 tons (per unit) VT-29			1	2	over 2 use .967 hrs. per unit
	EVAPORATIVE	3-99 tons (per unit) VT-30	1	2	3	4-5	over 5 use .372 hrs. per unit
	AIR-COOLED	All sizes (per fan assembly) VT-31	1	2	3-4	5-6	over 6 use .335 hrs. per fan assembly
COOLING TOWER	METAL	3-99 tons (per unit) VT-33		1	2	3	over 3 use .663 hrs. per unit
		100-199 tons (per unit) VT-32			1		over 1 use 1.205 hrs. per unit
	METAL (COOLING ONLY)	100-199 tons (per unit) VT-29			1	2	over 2 use .967 hrs. per unit
	METAL (EVAPORATIVE)	3-99 tons (per unit) VT-30	1	2	3	4-5	over 5 use .372 hrs. per unit
	WOOD	25-199 tons (per unit) VT-33		1	2	3	over 3 use .663 hrs. per unit
		200-299 tons (per unit) VT-32			1		over 1 use 1.205 hrs. per unit
PACKAGE-TYPE/ SELF-CONTAINED		All sizes (per unit) VT-34		1		2	over 2 use .742 hrs. per unit
WINDOW		All sizes (per unit) VT-35	2 (for 1 unit use Group A, .13 hrs.)	3-4	5-7	8-11	over 11 use .184 hrs. per unit

TASK AREA: Air conditioning units - seasonal shutdown

TASK AREA: Air conditioning units - remove and install units/components

Tasks Include: Time to perform all operations required to remove and install units/components.

	DESCRIPTION			GROUP E Craft Time 1.8 hrs.	GROUP F Craft Time 2.9 hrs.	GROUP G Craft Time 4.4 hrs.	GROUP H Craft Time 6.0 hrs.	NOTE
AIR HANDLER		COIL (HEATING AND COOLING)	25-99 tons (per component) VT-11			1		over 1 use 3.838 hrs. per component
		EVAPORATOR	25-99 tons (per component) VT-12				1	over 1 use 5.346 hrs. per component
	FAN AND MOTOR	CENTRIFUGAL (SQUIRREL CAGE)	All sizes (per component) VT-73	1		2	3	over 3 use 1.843 hrs. per component
	FAN AND MOTOR	PROPELLER-TYPE	All sizes (per component) VT-74	1		2	3	over 3 use 1.928 hrs. per component
		100 disposable-type filters from/to overhead plenums (average 10 plenums) (per 100 filters) VT-65					1	over 1 use 6.158 hrs. per 100 filters (average 10 plenums)
COMPRESSOR	OPEN (CENTRAL COMPRESSION SYSTEM)		10-50 tons (per unit) VT-6				1	over 1 use 5.824 hrs. per unit
		VALVE PLATES	All sizes (per unit) VT-67			1		over 1 use 4.639 hrs. per unit
		THERMOSTATIC EXPANSION VALVE	All sizes (per component) VT-14			1		over 1 use 3.913 hrs. per component
CONDENSER		AIR-COOLED	3-10 tons (per unit) VT-8			1		over 1 use 4.276 hrs. per unit
			25-99 tons (per unit) VT-9					use 9.755 hrs. per unit
		SHELL AND TUBE WATER-COOLED	25-99 tons (per unit) VT-10					use 7.655 hrs. per unit

TASK AREA: Air conditioning units - remove and install units/components

TASK AREA: Air conditioning units - remove and install units/components

Tasks Include: Time to perform all operations required to remove and install units/components

	DESCRIPTION			GROUP E Craft Time 1.8 hrs.	GROUP F Craft Time 2.9 hrs.	GROUP G Craft Time 4.4 hrs.	GROUP H Craft Time 6.0 hrs.	NOTE
	COOLING TOWER FAN AND MOTOR (ONLY)		All sizes (per component) VT-75		1	2		over 2 use 2.531 hrs. per component
PACKAGE-TYPE	AIR-COOLED CONDENSER		3-10 tons (per unit) VT-8			1		over 1 use 4.276 hrs. per unit
	EVAPORATOR		3-10 tons (per unit) VT-8			1		over 1 use 4.276 hrs. per unit
	FAN AND MOTOR	CENTRIFUGAL (SQUIRREL CAGE)	All sizes (per component) VT-73	1		2	3	over 3 use 1.843 hrs. per component
		PROPELLER-TYPE	All sizes (per component) VT-74	1		2	3	over 3 use 1.928 hrs. per component

TASK AREA: Air conditioning units - remove and install units/components

TASK AREA: Air conditioning systems/units/components - pump down, charge and evacuate

DESCRIPTION	GROUP B Craft Time 0.3 hrs.	GROUP C Craft Time 0.6 hrs.	GROUP D Craft Time 1.1 hrs.	GROUP E Craft Time 1.8 hrs.	NOTE
Charge air conditioning system (per ton) VT-1		1-4	5-20	21-41	over 41 tons use .621 hrs. plus .04 hrs. per ton
Pump down air conditioning system (compressor only) (per unit) VT-2	1	2	3	4-5	over 6 use .382 hrs. per unit
Pump down air conditioning system (into receiver) (per system) VT-3		1	2	3	over 3 use .591 hrs. per system
Pump down air conditioning system (separate cylinders) (per component) VT-4		1-2	3-4	5-8	over 8 tons use .279 hrs. plus .23 hrs. per cylinder
Pull vacuum on air conditioning system (per system) VT-5				1	over 1 use 1.514 hrs. per air conditioning system

TASK AREA: Air conditioning systems/units/components - pump down, charge and evacuate

TASK AREA: Remove and install air conditioning components - miscellaneous

NOTE: These task times are for miscellaneous work that could apply to components found in more than one system/unit with the same work content.

			DESCRIPTION	GROUP B Craft Time 0.3 hrs.	GROUP C Craft Time 0.6 hrs.	GROUP E Craft Time 1.8 hrs.	GROUP F Craft Time 2.9 hrs.	NOTE
WINDOW AIR CONDITIONING UNITS REMOVE AND INSTALL	INSTALL	FAISABLE ASSH	Up to 1/2 ton (per unit) VT-77		1	3 (for 2 units use Group D, 1.1 hrs.)	4-5	over 5 use .697 hrs. per unit
			1/2 - 2 tons (per unit) VT-16			1	2	over 2 use 1.475 hrs. per unit
		FIXED ASSH	Up to 3 tons (per unit) VT-24				1	over 1 use 2.230 hrs. per unit
	REMOVE	RAISABLE ASSH	Up to 1/2 ton (per unit) VT-76	1	2	5-6 (for 3-4 units use Group D, 1.1 hrs.)	7-10	over 10 use .328 hrs. per unit
			1/2 - 2 tons (per unit) VT-17		1	3 (for 2 units use Group D, 1.1 hrs.)	4-5	over 5 use .604 hrs. per unit
REMOVE AND INSTALL			Belt on water cooler (per unit) VT-69	1	2-3	7-9 (for 4-6 units use Group D, 1.1 hrs.)	10-15	over 15 use .232 hrs. per unit
			Disposable type filter in separate overhead unit (per filter) VT-21	1	2-3	7-9 (for 4-6 filters use Group D, 1.1 hrs.)	10-15	over 15 use .231 hrs. per filter
			Set of 3 belts on a compressor in an open (central compression) air conditioning system (per set) VT-22		1	2-3	4-5	over 5 use .701 hrs. per set

TASK AREA: Remove and install air conditioning components - miscellaneous

TASK AREA: Remove and install air conditioning components - miscellaneous						
NOTE: These task times are for miscellaneous work that could apply to components found in more than one system/unit with the same work content.						
	DESCRIPTION	GROUP C Craft Time 0.6 hrs.	GROUP D Craft Time 1.1 hrs.	GROUP E Craft Time 1.8 hrs.	GROUP F Craft Time 2.9 hrs.	NOTE
REMOVE AND INSTALL	Electric motor (under 1 HP) (per component) VT-7	1	2	3-4	5-6	over 6 use .535 hrs. per component
	Strainer or dryer in open (central compression) air conditioning system (per component) VT-15			1	2	over 2 use 1.639 hrs. per component
	Door gasket on domestic refrigerator (per gasket) VT-68		1		2	over 2 use 1.214 hrs. per gasket
	FAN AND MOTOR: Centrifugal (per assembly) VT-73			1		over 1 use 1.843 hrs. per assembly
	FAN AND MOTOR: Propeller-type (per assembly) VT-74			1		over 1 use 1.928 hrs. per assembly
	FAN AND MOTOR: In cooling tower (per unit) VT-75				1	over 1 use 2.531 hrs. per unit
	Seals and bearings in water pump-3 HP motor (per component) VT-72			1	2	over 2 use 1.576 hrs. per component
	Float linkage in water towers or condensers (per component) VT-23	1	2	3-4	5-7	over 7 use .509 hrs. per component
	Replace solid bearing with split type bearing on centrifugal (squirrel cage) fan shaft (per bearing) VT-18		1		2	over 2 use 1.243 hrs. per bearing
TASK AREA: Remove and install air conditioning components - miscellaneous						

TASK AREA: Air conditioning units/components - miscellaneous

NOTE: These task times are for miscellaneous work that could apply to components found in more than one system/unit with the same work content.

	DESCRIPTION		GROUP G Craft Time 4.4 hrs.	GROUP H Craft Time 6.0 hrs.	GROUP J Craft Time 10.0 hrs.	GROUP K Craft Time 12.5 hrs.	NOTE
REMOVE AND INSTALL	Receiver/King Valve in open (central compression) air conditioning system (per component) VT-13		1		2	3	over 3 use 3.959 hrs. per component
	Thermostatic expansion valve in open (central compression) air conditioning system (per component) VT-14		1		2	3	over 3 use 3.913 hrs. per component
	100 disposable-type filters (average 10 plenums) (per 100 filters) VT-65			1		2	over 2 use 6.158 hrs. per 100 filters
	Valve plates on compressor in open (central compression) air conditioning system (per unit) VT-67		1		2	3	over 3 use 4.639 hrs. per unit
DISASSEMBLE, CLEAN, INSPECT ASSEMBLE, EVACUATE COMPRESSOR		10-25 tons (per unit) VT-70	1		2		over 2 use 5.179 hrs. per unit
		50-100 tons (per unit) VT-71			1		over 1 use 9.323 hrs. per unit
ANNUAL MAINTENANCE ON ABSORBER OR GENERATOR		100 tons absorption system (per unit) VT-19		1		2	over 2 use 6.986 hrs. per unit
		300 tons absorption system (per unit) VT-20				1	over 1 use 11.436 hrs. per unit

TASK AREA: Air conditioning units/components - miscellaneous

Section 2. Heating

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TASK AREA Fire or water tube boiler - assist boiler inspector in inspection

External Inspection: Includes all external boiler parts and components.
Internal Inspection: Includes all internal boiler parts and components.
Operating Inspection: Includes using inspector gage, checking and adjusting safety valve, waiting for maximum pressure.
Hydrostatic Inspection: Includes using hand pump, search and repair, search and repair minor leaks; no time to fill or drain drum.

		DESCRIPTION	GROUP B Craft Time 0.3 hrs.	GROUP C Craft Time 0.6 hrs.	GROUP D Craft Time 1.1 hrs.	GROUP E Craft Time 1.8 hrs.	NOTE
EXTERNAL	INSPECTION	Fire tube (per boiler) VT-200	1	2	3	4-5	over 5 use .383 hrs. per boiler
		Water tube (per boiler) VT-201		1	2-3	4	over 4 use .464 hrs. per boiler
INTERNAL	INSPECTION	Fire tube (per boiler) VT-202		1	2	3	over 3 use .671 hrs. per boiler
		Water tube (per boiler) VT-203				1	over 1 use 1.426 hrs. per boiler
OPERATING TEST	INSPECTION	Fire tube (per boiler) VT-204		1	2	3-4	over 4 use .533 hrs. per boiler
		Water tube (per boiler) VT-205			1	2	over 2 use .876 hrs. per boiler

TASK AREA: Fire or water tube boiler - assist boiler inspector in inspection

TASK AREA: Fire or water tube boiler - assist boiler inspector in inspection

External Inspection: Includes all external boiler parts and components.
Internal Inspection: Includes all internal boiler parts and components.
Operating Inspection: Includes using inspector gage, checking and adjusting safety valve, waiting for maximum pressure.
Hydrostatic Inspection: Includes using hand pump, search and repair minor leaks; no time to fill or drain drum.

	DESCRIPTION	GROUP D Craft Time 1.1 hrs.	GROUP E Craft Time 1.8 hrs.	GROUP F Craft Time 2.9 hrs.	GROUP G Craft Time 4.4 hrs.	NOTE
HYDROSTATIC TEST INSPECTION	Fire tube (per boiler) VT-206		1	2	3	over 3 use 1.480 hrs. per boiler
	Water tube (per boiler) VT-207			1	2	over 2 use 2.436 hrs. per boiler
INTERNAL AND EXTERNAL INSPECTION	Fire tube (per boiler) VT-208	1	2	3	4	over 4 use 1.053 hrs. per boiler
	Water tube (per boiler) VT-209		1		2	over 2 use 1.890 hrs. per boiler
INTERNAL AND EXTERNAL HYDROSTATIC INSPECTION	Fire tube (per boiler) VT-210			1	2	over 2 use 2.534 hrs. per boiler
	Water tube (per boiler) VT-211				1	over 1 use 4.326 hrs. per boiler

TASK AREA: Fire or water tube boiler - assist boiler inspector in inspection

TASK AREA: Fire tube or water tube boiler, superheater, precipitator, or preheater-open or close fireside

Open or close fireside: Consists of removing and installing a combination of doors, plates, steel strips, firebricks, etc. Includes all work necessary to remove or install each piece.

Total time shall be obtained as follows: 1) Determine total number of each component to be removed or installed.
2) Find group time value for each number of components and
3) Add group time values together.

NOTE: Quantities given are for remove or install and must be doubled for remove and install.

	DESCRIPTION	GROUP A Craft Time .13 hrs.	GROUP B Craft Time 0.3 hrs.	GROUP C Craft Time 0.6 hrs.	GROUP D Craft Time 1.1 hrs.	GROUP E Craft Time 1.8 hrs.
REMOVE OR INSTALL	Tube sheet compartment door (per door) VT-212	1-2	3-5			
	Fire box door (per door) VT-213	1-2	3-4	5-8		
	Ash pit door (per door) VT-214	1-2	3-4	5-8		
	Access pass door (per door) VT-215	1-2	3-4	5-8		
	Explosion proof doors (per door) VT-216	1	2-3	4-8		
	Superheater door (per door) VT-217	1	2-3	4-8		
	Precipitator door (per door) VT-218			1	2	3-4
	Access door (per door) VT-219	1-2	3-4	5-8		
	Clean-out door (per door) VT-220	1-7	8-15			
	Peephole door (per door) VT-221	1-7	8-15	16-31		

TASK AREA: Fire tube or water tube boiler, superheater, precipitator, or preheater-open or close fireside

TASK AREA Fire tube or water tube boiler, superheater, precipitator or preheater-open or close fireside

Open or close fireside: Consists of removing and installing a combination of doors, plates, steel strips, firebricks, etc. Includes all work necessary to remove or install each piece.

Total time shall be obtained as follows: 1) Determine total number of each component to be removed or installed.
2) Find group time value for each number of components and
3) Add group time values together.

NOTE: Quantities given are for remove or install and must be doubled for remove and install.

	DESCRIPTION	GROUP A Craft .13 Time hrs.	GROUP B Craft 0.3 Time hrs.	GROUP C Craft 0.6 Time hrs.	GROUP D Craft 1.1 Time hrs.	
REMOVE OR INSTALL	Inspection plates (bolted) (per plate) VT-222	1-2	3-4	5-8	9-14	
	Steel sheet strip (per strip) VT-223	1-15	15-30			
	Firebox top (per top) VT-224	1-4	5-9	10-19		
	Firebox top insulation (per piece) VT-225	1-8	9-15	16-32		
	Firebrick (per brick) VT-226	1-15	15-30	31-61	62-106	

TASK AREA: Fire tube or water tube boiler, superheater, precipitator-open or close fireside

TASK AREA: Fire tube or water tube boiler-open or close waterside

Open or close waterside: Consists of removing and installing a combination of plugs, manhole and handhole covers. Use of ladders where required is included.

Total time shall be obtained as follows: 1) Determine total number of each component to be removed or installed
2) Find group time value for each number of components and
3) Add group time values together.

	DESCRIPTION	GROUP A Craft Time .13 hrs.	GROUP B Craft Time 0.3 hrs.	GROUP C Craft Time 0.6 hrs.	GROUP D Craft Time 1.1 hrs.	GROUP E Craft Time 1.8 hrs.
REMOVE OR INSTALL	Shell plug (per plug) VT-227	1-6	7-13			
REMOVE	Manhole cover (per cover) VT-228	1-2	3-4	5-8	9-14	
REMOVE	Handhole cover (per cover) VT-229	1-3	4-6	7-13	14-23	24-36
INSTALL	Manhole cover (per cover) VT-230		1	2-3	4-6	7-10
INSTALL	Handhole cover (per cover) VT-231	1	2-3	4-6	7-11	12-18
	Prepare to drain boiler (per boiler) VT-232	1-2				
	Fill and inspect boiler (per boiler) VT-233			1	2	

TASK AREA: Fire tube or water tube boiler-open or close waterside

TASK AREA Water tube boiler-clean fireside, waterside, air preheater (fireside), precipitator (fireside), superheater

Fireside heavy slag: Remove slag, loose cinders, clean fire box, 2 passes, tubes by scraping. Vacuum fire box top.
Fireside light slag: Remove slag, loose cinders, clean fire box, 2 passes, tubes by scraping. No time to vacuum fire box top.
Waterside: Wash and scrape drum. Turbining tool in tubes. No time for remove or install baffling.
Air preheater: Use water hose in tubes. Clean smoke box under air preheater tubes using airhose and shovel.
Precipitator: Use airhose; blow out compartment at top of tubes, push airhose into tubes.
Superheater: Use scraper; clean header box by vacuuming.
No time to erect or dismantle scaffold, clean superheater tubes or header, air preheater or precipitator-

DESCRIPTION			GROUP D Craft Time 1.1 hrs.	GROUP F Craft Time 2.9 hrs.	GROUP G Craft Time 4.4 hrs.		
WATERSIDE	5' ID X 20' LONG DRUM	High pressure water only - no turbining-to 800 tubes (per boiler) VT-242	1				
	3' ID X 10' LONG DRUM	Turbined-60 (1" to 3") tubes-10' to 20' long (per boiler) VT-243		1			
		Turbined-98 (2 1/2" to 4") tubes-30' to 50' long (per boiler) VT-245		1			
Precipitator - 36 (4") tubes 8' long (per boiler) VT-255			1				
Superheater - 120 tubes (per boiler) VT-256					1		

TASK AREA: Water tube boiler-clean fireside, waterside; air preheater (fireside), precipitator (fireside), superheater

TASK AREA Water tube boiler-clean fireside, waterside, air preheater (fireside), precipitator (fireside), superheater

Fireside heavy slag: Remove slag, loose cinders, clean fire box, 2 passes, tubes by scraping. Vacuum fire box top.
Fireside light slag: Remove slag, loose cinders, clean fire box, 2 passes, tubes by scraping. No time to vacuum fire box top.
Waterside: Wash and scrape drum. Turbining tool in tubes. No time for remove or install baffling.
Air preheater: Use water hose in tubes. Clean smoke box under air preheater tubes using air hose and shovel.
Precipitator: Use airhose; blow out compartment at top of tubes, push airhose into tubes.
Superheater: Use scraper; clean header box by vacuuming.
No time to erect or dismantle scaffold, clean superheater tubes or header, air preheater or precipitator-

		DESCRIPTION	GROUP H Craft Time 6.0 hrs.	GROUP I Craft Time 8.0 hrs.	GROUP K Craft Time 12.5 hrs.	GROUP L Craft Time 16.0 hrs.	
FIRESIDE	HEAVY SLAG	4' X 10' X 15' fire box - 110 tubes (per boiler) VT-235				1	
	LIGHT SLAG	4' X 10' X 15' fire box - 166 tubes (per boiler) VT-234		1			
		8' X 13' X 20' fire box - 182 tubes (per boiler) VT-236				1	
WATERSIDE (TURBINED)		3' ID X 10' long drum 110 (1" to 3") tubes - 10'-20' long (per boiler) VT-244	1				
		3' ID X 20' long drum 141 (2 1/2" to 4") tubes - 30'-50' long (per boiler) VT-246		1			
		3' ID X 20' long drum 240 (2 1/2" to 4") tubes - 30'-50' long (per boiler) VT-247			1		
		3' ID X 20' long drum 321 (1 1/2" to 4") tubes - 30'-50' long (per boiler) VT-248				1	

TASK AREA Water tube boiler-clean fireside, waterside, air preheater (fireside), precipitator (fireside), superheater

TASK AREA: Water tube boiler-clean fireside, waterside, air preheater (fireside), precipitator (fireside), superheater

Fireside heavy slag: Remove slag, loose cinders, clean fire box, 2 passes, tubes by scraping. Vacuum fire box top.
Fireside light slag: Remove slag, loose cinders, clean fire box, 2 passes, tubes by scraping. No time to vacuum fire box top.
Waterside: Wash and scrape drum. Turbining tool in tubes. No time for remove or install baffling.
Air preheater: Use water hose in tubes. Clean smoke box under air preheater tubes using airhose and shovel.
Precipitator: Use airhose; blow out compartment at top of tubes, push airhose into tubes.
Superheater: Use scraper; clean header box by vacuuming.
No time to erect or dismantle scaffold, clean superheater tubes or header, air preheater or precipitator-

		DESCRIPTION	GROUP N Craft Time 24.0 hrs.	GROUP P Craft Time 29.0 hrs.	GROUP Q Craft Time 36.0 hrs.	GROUP S Craft Time 55.0 hrs.	GROUP V Craft Time 85.0 hrs.
FIRESIDE	HEAVY SLAG	8' X 13' X 20' fire box - 182 tubes (per boiler) VT-239			1		
		8' X 16' X 20' fire box - 420 tubes (per boiler) VT-240				1	
		14' X 20' X 30' fire box - 600 tubes (per boiler) VT-241					1
	LIGHT SLAG	10' X 16' X 20' fire box - 317 tubes (per boiler) VT-237	1				
		14' X 20' X 30' fire box - 400 tubes (per boiler) VT-238		1			
WATERSIDE (TURBINED)		5' ID X 20' long drum 425 (2 1/2" to 4") tubes - 30' to 50' long (per boiler) VT-249	1				
		5' ID X 20' long drum 590 (2 1/2" to 4") tubes - 30' to 50' long (per boiler) VT-250		1			
		5' ID X 20' long drum 732 (2 1/2" to 4") tubes - 30' to 50' long (per boiler) VT-251			1		

TASK AREA: Water tube boiler-clean fireside, waterside, air preheater (fireside), precipitator (fireside), superheater

TASK AREA: Water tube boiler-clean fireside, waterside, air preheater (fireside), precipitator (fireside), superheater

Fireside heavy slag: Remove slag, loose cinders, clean fire box, 2 passes, tubes by scraping. Vacuum fire box top.
Fireside light slag: Remove slag, loose cinders, clean fire box, 2 passes, tubes by scraping. No time to vacuum fire box top.
Waterside: Wash and scrape drum. Turbining tool in tubes. No time for remove or install baffling.
Air preheater: Use water hose in tubes. Clean smoke box under air preheater tubes using airhose and shovel.
Precipitator: Use airhose; blow out compartment at top of tubes, push airhose into tubes.
Superheater: Use scraper; clean header box by vacuuming.
No time to erect or dismantle scaffold, clean superheater tubes or header, air preheater or precipitator-

	DESCRIPTION	GROUP K Craft Time 12.5 hrs.	GROUP M Craft Time 20.0 hrs.	GROUP P Craft Time 29.0 hrs.		
AIR PREHEATER (FIRESIDE)	432 (2" X 20') tubes (per boiler) VT-252	1				
	675 (2 1/2" X 30') tubes (per boiler) VT-253		1			
	1024 (2 1/2" X 30') tubes (per boiler) VT-254			1		

TASK AREA: Water tube boiler-clean fireside, waterside, air preheater (fireside), precipitator (fireside), superheater

TASK AREA: Fire tube or water tube boiler-clean tubes, tube sheet compartments, fire boxes, waterside drum CONTINUED ON NEXT PAGE

Fire tubes are cleaned by using a tube scraper or pneumatic turbining tool.
Tube sheet compartments are cleaned using a vacuum and broom.
Fire boxes: Cleaned using broom, shovel and vacuum.
Waterside: Cleaned by washing interior of drum with hose and inspecting work.

DESCRIPTION			GROUP A Craft .13 Time hrs.	GROUP B Craft 0.3 Time hrs.	GROUP C Craft 0.6 Time hrs.	GROUP D Craft 1.1 Time hrs.	GROUP E Craft 1.8 Time hrs.
8'	Tube scraper (per tube)	VT-257	1-19	20-42	43-88	89-156	157-247
	Pneumatic turbining (per tube)	VT-258		1-10	11-31	32-62	63-104
12'	Tube scraper (per tube)	VT-259	1-13	14-28	29-58	59-104	105-164
	Pneumatic turbining (per tube)	VT-260		1-7	8-20	21-41	42-69
16'	Tube scraper (per tube)	VT-261	1-9	10-21	22-44	45-78	79-123
	Pneumatic turbining (per tube)	VT-262		1-5	6-15	16-31	32-52
20'	Tube scraper (per tube)						
	Pneumatic turbining (per tube)	VT-263		1-4	5-12	13-25	26-41
	Tube sheet compartment (per compartment)	VT-264			1		2
	Fire box (per fire box)	VT-265			1	2	
Fire tube boiler drum interior		VT-266				Fire tube boiler 1,205 lb/hr or 36 HP	
		VT-267					Fire tube boiler 4,185 lb/hr or 175 HP
		VT-268					Fire tube boiler 4,185 lb/hr or 175 HP

TASK AREA: Fire tube or water tube boiler-clean tubes, tube sheet compartments, fire boxes, waterside drum

TASK AREA: Fire tube or water tube boiler-clean tubes, tube sheet compartments, fire boxes, waterside drum CONTINUED ON NEXT PAGE

Fire tubes: Cleaned by using a tube scraper or pneumatic turbining tool.
Tube sheet compartments: Cleaned using a vacuum and broom.
Fire boxes: Cleaned using broom, shovel, and vacuum.
Waterside: Cleaned by washing interior of drum with hose and inspecting work.

	DESCRIPTION	GROUP F Craft Time 2.9 hrs.	GROUP G Craft Time 4.4 hrs.	GROUP H Craft Time 6.0 hrs.	GROUP I Craft Time 8.0 hrs.	GROUP J Craft Time 10.0 hrs.
8'	Tube scraper (per tube) VT-257	248-406	407-588			
	Pneumatic turbining (per tube) VT-258	105-177	178-260	261-354	355-458	459-562
12'	Tube scraper (per tube) VT-259	165-270	271-392	393-528		
	Pneumatic turbining (per tube) VT-260	70-118	119-173	174-236	237-305	306-375
16'	Tube scraper (per tube) VT-261	124-203	204-294	295-396	397-510	
	Pneumatic turbining (per tube) VT-262	53-88	89-130	131-177	178-229	230-281
20'	Tube scraper (per tube)					
	Pneumatic turbining (per tube) VT-263	42-70	71-104	105-141	142-183	184-225
	Tube sheet compartment (per compartment) VT-264					
	Fire box (per fire box) VT-265					
	Fire tube Boiler drum interior VT-269	Fire tube boiler 6,696 lb/hr or 200 HP				

TASK AREA: Fire tube or water tube boiler-clean tubes, tube sheet compartments, fire boxes, waterside drum

TASK AREA: Fire tube or water tube boiler-clean tubes, tube sheet compartments, fire boxes, waterside drum CONTINUED FROM PREVIOUS PAGE

Fire tubes: Cleaned by using a tube scraper or pnuematic turbining tool.

	DESCRIPTION	GROUP K Craft Time 12.5 hrs.	GROUP L Craft Time 16.0 hrs.	GROUP M Craft Time 20.0 hrs.	GROUP N Craft Time 24.0 hrs.	
12'	Tube scraper (per tube) VT-259					
	Pneumatic turbining (per tube) VT-260	376-479	480-618			
16'	Tube scraper (per tube) VT-261					
	Pneumatic turbining (per tube) VT-262	282-359	360-463	364-567		
20'	Tube scraper (per tube)					
	Pneumatic turbining (per tube) VT-263	224-287	288-370	371-454	455-537	

TASK AREA: Fire tube or water tube boiler-clean tubes

TASK AREA Boiler tubes-remove and install tubes to 30' long and 4" OD

CONTINUED ON NEXT PAGE

Method 1: Remove boiler tubes through manhole or handhole without cutting into smaller sections and install new tubes.
Method 2: Remove boiler tubes through manhole by cutting into smaller sections and install new tubes.
Method 3: Remove and install tubes through own hole and tube sheet.

DESCRIPTION	GROUP E Craft Time 1.8 hrs.	GROUP G Craft Time 4.4 hrs.	GROUP I Craft Time 8.0 hrs.	GROUP K Craft Time 12.5 hrs.	GROUP H Craft Time 20.0 hrs.
Method 1 (per tube) VT-270	2	5-6	9-10	14-17	22-26
Method 2 (per tube) VT-271	2	5-6	9-10	13-16	21-25
Method 3 (per tube) VT-272	2	4-5	8-9	12-14	20-23
Air perheater tubes (per tube) VT-273	2	4-5	8-9	12-14	20-23
Tube sheet compartment door and door frame (per door) VT-274	2	5-6			
NOTE: When hoist is required for reinstalling boiler tubes, add .12 hrs. per tube installed in this manner. VT-275					

TASK AREA: Boiler tubes-remove and install tubes to 30' long and 4" OD

TASK AREA Boiler tubes-remove and install tubes to 30' long and 4" OD

Method 1: Remove boiler tubes through manhole or handhole without cutting into smaller sections, and install new tubes.
Method 2: Remove boiler tubes through manhole by cutting into smaller sections, and install new tubes.
Method 3: Remove and install tubes through own hole in tube sheet.

DESCRIPTION	GROUP P Craft Time 29.0 hrs.	GROUP R Craft Time 45.0 hrs.	GROUP T Craft Time 65.0 hrs.	GROUP V Craft Time 85.0 hrs.	NOTE
Method 1 (per tube) VT-270	29-36	46-57	71-82	95-106	Add .82 hrs. for each additional tube
Method 2 (per tube) VT-271	31-37	47-58	70-81	94-104	Add .86 hrs. for each additional tube
Method 3 (per tube) VT-272	28-34	43-53	64-74	86-95	Add .94 hrs. for each additional tube
Air perheater tubes (per tube) VT-273	28-34	43-53	64-74	86-95	Add .94 hrs. for each additional tube
NOTE: When hoist is required for reinstalling boiler tubes, add .12 hrs. for tube installed in this manner. VT-275					

TASK AREA: Boiler tubes-remove and install tubes to 30' long and 4" OD

TASK AREA: Sectional boiler, cast iron, low pressure - remove and install push nipples

Remove and install push nipples includes cleaning nipples and fabricating new gaskets.
Normally there are an average of 3 push nipples per boiler section.

DESCRIPTION	GROUP M Craft Time 20.0 hrs.	GROUP N Craft Time 24.0 hrs.	GROUP P Craft Time 29.0 hrs.	GROUP Q Craft Time 36.0 hrs.	NOTE
7 boiler sections (21 push nipples) VT-276	per 21 push nipples				NOTE: Time for more then 13 boiler sections may be figured by adding 2.45 hrs. for each additional section to the above group time value.
9 boiler sections (27 push nipples) VT-276		per 27 push nipples			
11 boiler sections (33 push nipples) VT-276			per 33 push nipples		
13 boiler sections (39 push nipples) VT-276				per 39 push nipples	

TASK AREA: Sectionsl boiler, cast iron, low pressure - remove and install push nipples

TASK AREA: Heaters; unit, wall, space, floor, hot water - remove, install, disassemble, clean, lube, inspect, assemble

Clean and inspect: Includes cleaning component parts and heater housing, lubrication of motors and blowers, and checking unit operation.
Install: Includes assembling necessary parts, making any necessary brackets, putting unit in place and connecting fuel lines and vent stacks; use ladder or scaffold as required.
Repair: Includes repair an average of two (2) leaks.

DESCRIPTION	GROUP F Craft Time 2.9 hrs.	GROUP G Craft Time 4.4 hrs.	GROUP H Craft Time 6.0 hrs.	GROUP I Craft Time 8.0 hrs.	NOTE
Install new unit heater (per heater) VT-284	1		2	3	over 3 use 2.776 hrs. per heater
Remove, clean, inspect and install heater (per heater) VT-278	1		2		over 2 use 3.282 hrs. per heater
Remove old heater and install new heater (per heater) VT-279		1		2	over 2 use 3.765 hrs. per heater
Remove, disassemble, clean, inspect, test repair and install heater (per heater) VT-280			1		over 1 use 5.395 hrs. per heater

TASK AREA: Heaters; unit, wall, space, floor, hot water - remove, install, disassemble, clean, lube, inspect, assemble

TASK AREA: Heaters; unit, wall, space, floor, hot water - remove, install, disassemble, clean, lube, inspect, assemble

DESCRIPTION			GROUP C Craft Time 0.6 hrs.	GROUP D Craft Time 1.1 hrs.	GROUP E Craft Time 1.8 hrs.	GROUP F Craft Time 2.9 hrs.	NOTE
Clean and inspect heater (per heater) VT-277			1	2	3	4-6	over 6 use .58 hrs. per heater
WALL FURNACE	GAS FIRED	Install unit (per furnace) VT-281	1	2	3	4-6	over 6 use .561 hrs. per furnace
		Clean unit (per furnace) VT-282	1	2	3	4-6	over 6 use .590 hrs. per furnace
		Remove and install unit (per furnace) VT-283		1	2	3	over 3 use 1.067 hrs. per furnace
	OIL FIRED	Install unit (per furnace) VT-281	1	2	3	4-6	over 6 use .561 hrs. per furnace
		Clean unit (per furnace) VT-285		1	2	3	over 3 use .933 hrs. per furnace
		Remove and install unit (per furnace) VT-283		1	2	3	over 3 use 1.067 hrs. per furnace
Apartment sized space heater or floor furnace-disassemble, clean, inspect, reassemble		Does not include clean chimney or carburetor (per heater) VT-286	1	2	3-4	5-6	over 6 use .547 hrs. per heater
		Includes clean chimney and carburetor (per heater) VT-287		1	2	3	over 3 use .966 hrs. per heater
Hot water heater (gas fired-30 gal.)		Install heater (per heater) VT-288	1	2	3	4-6	over 6 use .598 hrs. per heater
		Clean heater (per heater) VT-290		1	2	3-4	over 4 use .876 hrs. per heater
		Remove and install heater (per heater) VT-289		1		2	over 2 use 1.231 hrs. per heater
Apartment size gas unit heater		Disassemble, clean, lubricate, inspect, reassemble including clean chimney (per heater) VT-291	1		2	3-4	over 4 use .744 hrs. per heater

TASK AREA: Heaters; unit, wall, space, floor, hot water - remove, install, disassemble, clean, lube, inspect, assemble

TASK AREA Blowers and furnaces - blowers, miscellaneous-disassemble, clean, lubricate, inspect, assemble, regulate

		DESCRIPTION	GROUP A Craft .13 Time hrs.	GROUP B Craft 0.3 Time hrs.	GROUP C Craft 0.6 Time hrs.	GROUP D Craft 1.1 Time hrs.	NOTE
BLOWER UNIT	Disassemble, clean, lubricate, inspect, assemble	Cold water blower unit with (2) 8" centrifugal (squirrel cage) fans (per blower) VT-292		1	2	3	over 3 use .358 hrs. per blower unit
		Blower unit with electric and pneumatic controls (4) 8" centrifugal (squirrel cage) fans (per blower) VT-293				1	over 1 use .933 hrs. per blower unit
	Regulate blower unit thermostat and room thermostat (per blower) VT-294		1	2	3-5	6-9	over 9 use .146 hrs. per blower unit
FURNACE	Hot air furnace, gun type, (up to 770,000 BTU) off-season maintenance (per furnace) VT-295					1	over 1 use 1.238 hrs. per furnace
	Clean fuel oil filter, renew element and gasket (per furnace) VT-297		.2	3-5	6-10	11-18	over 18 use .08 hrs. per furnace
	Clean, inspect, adjust electrode/nozzle assembly (per furnace) VT-298		1	2	3-4	5-8	over 8 use .173 hrs. per furnace
	Service fuel unit - includes fuel oil pump, forced draft blower and motor (per furnace) VT-299		1	2	3-4	5-8	over 8 use .169 hrs. per furnace
	Service furnace fire box and flue (per furnace) VT-300				1	2-3	over 3 use .412 hrs. per furnace
	Service furnace stack switch (per furnace) VT-301		1-2	3-4	5-8	9-15	over 15 use .09 hrs. per furnace
	Service air circulation fan and motor (per furnace) VT-302			1	2-3	4-6	over 6 use .210 hrs. per furnace
	Conduct furnace operational check (per furnace) VT-303		1	2-3	4-7	8-12	over 12 use .110 hrs. per furnace

TASK AREA Blowers and furnaces - blowers, miscellaneous-disassemble, clean, lubricate, inspect, assemble, regulate

TASK AREA: Analyze boiler water samples					
Analyze samples of boiler water from fire tube boilers that are treated with chemicals.					
DESCRIPTION	GROUP B Craft Time 0.3 hrs	GROUP C Craft Time 0.6 hrs	GROUP D Craft Time 1.1 hrs	GROUP E Craft Time 1.8 hrs	NOTE
ANALYZE BOILER WATER SAMPLES (PER BOILER) VT-296	1	2	3-5	6-8	Over 8 use .273 hrs per boiler
TASK AREA: Analyze boiler water samples					

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CHAPTER 3

TASK TIMES

VT-1 CHARGE AIR CONDITIONING SYSTEM.

NO	REFERENCE	WORK UNIT DESCRIPTION	HOURS	UNITS	KEY
1	PWMU-1-0932	REMOVE AND INSTALL SERVICE VALVE CAP NUTS	.00720	SYSTEM	
2	PWMU-1-0000	INSTALL AND REMOVE GAUGE/HOSE MANIFOLD	.03340	SYSTEM	
3	PWC-14-IV	RELEASE AND PURGATEN VALVES	.00760	SYSTEM	
4	PWV-1-XXXX	CHARGE AND SIZE AIR CONDITIONING SYSTEM WITH REFRIGERANT	.01950 .03760	SYSTEM POUNDS	
5	PWA-3-I	HOSE CYLINDER OF REFRIGERANT	.10350	SYSTEM	
6	XXXX	CHECK OPERATION OF SYSTEM	.00600	SYSTEM	

VT-1 0 .02160 HRS PER SYSTEM 0 .03780 HRS PER POUNDS

VT-2 PUMP JOHN AIR CONDITIONING SYSTEMS CONTAINING 2 LBS.

NO	REFERENCE	WORK UNIT DESCRIPTION	HOURS	UNITS	KEY
1	PWMU-1-0932	REMOVE AND INSTALL VALVE CAP NUTS	.00720	SYSTEM	
2	PWMU-1-0000	INSTALL AND REMOVE GAUGE/HOSE MANIFOLD	.03340	SYSTEM	
3	PWC-14-IV	RELEASE AND PURGATEN VALVES	.00760	SYSTEM	
4	PWV-1-I	RUN COMPRESSOR TO PUMP DOWN	.00972	SYSTEM	

VT-2 0 .05220 HRS PER SYSTEM

VT-3 PUMP JOHN AIR CONDITIONING SYSTEMS INTO RECEIVER.

NO	REFERENCE	WORK UNIT DESCRIPTION	HOURS	UNITS	KEY
1	PWMU-1-0932	REMOVE AND INSTALL VALVE CAP NUTS	.00720	SYSTEM	
2	PWMU-1-0000	INSTALL AND REMOVE GAUGE/HOSE MANIFOLD	.03340	SYSTEM	
3	PWC-14-IV	RELEASE AND PURGATEN VALVES	.00760	SYSTEM	
4	PWV-1-XXXX	PUMP DOWN SYSTEM INTO RECEIVER	.02000	SYSTEM	

VT-3 0 .07100 HRS PER SYSTEM

VT-6 REMOVE AND INSTALL COMPRESSOR, 10 TO 50 TONS, IN OPEN (CENTRAL COMPRESSION) AIR CONDITIONING SYSTEM

NO	REFERENCE	WORK UNIT DESCRIPTION	HOURS	UNITS	V38
1	VT-2	PUMP DOWN COMPRESSOR	.38220	SYSTEM	
2	PWMU-1-8552	REMOVE AND INSTALL BOLTS IN INTAKE AND DISCHARGE VALVES	.17440	SYSTEM	
3	PWMU-1-8011	REMOVE AND INSTALL INTAKE AND DISCHARGE VALVES	.14640	SYSTEM	
4	PWQ-4-I	REMOVE AND INSTALL OIL LINE AND GASES	.21916	SYSTEM	
5	PWMU-1-8552	REMOVE AND INSTALL BOLTS IN VALVE FITTINGS	.17440	SYSTEM	
6	PWMU-1-8011	REMOVE AND INSTALL VALVE FITTINGS	.14640	SYSTEM	
7	PWMU-1-8010	PLUG AND UNPLUG PORT OPENINGS	.10480	SYSTEM	
8	PWMU-1-8010	PULL AWAY AND PUSH VALVE TO COMPRESSOR	.05240	SYSTEM	
9	PWMU-1-8000	REMOVE AND INSTALL BOLTS FOR BELT GUARD	.07120	SYSTEM	
10	PWMU-1-8021	REMOVE AND INSTALL BELT GUARD	.04900	SYSTEM	
11	PWMU-1-8553	LOOSEN AND TIGHTEN MOTOR BASE BOLTS	.06960	SYSTEM	
12	PWMU-1-8010	REMOVE AND INSTALL BELTS	.10480	SYSTEM	
13	PWMU-1-8552	REMOVE AND INSTALL COMPRESSOR BASE BOLTS	.08720	SYSTEM	
14	PWN-10-XVI	REMOVE AND INSTALL COMPRESSOR	1.10240	SYSTEM	
15	PWMU-1-8011	REMOVE AND INSTALL FLYWHEEL	.07320	SYSTEM	
16	VT-1	CHARGE OPEN (CENTRAL COMPRESSION) AIR CONDITIONING SYSTEM	.62140 .37890	SYSTEM SYSTEM	
17	PWV-1-II	PUT COMPRESSOR INTO OPERATION	.35211	SYSTEM	
18	4211	CHECK OPERATION OF SYSTEM	.29203	SYSTEM	
19	PWA-5-II	MATERIAL HANDLING	.62154	SYSTEM	

VT-6 = 5.82357 HRS PER SYSTEM

VT-7 REMOVE AND INSTALL ELECTRIC MOTOR (UNDER 1-HP)

NO	REFERENCE	WORK UNIT DESCRIPTION	HOURS	UNITS	V38
1	PWMU-1-8000	REMOVE AND INSTALL SCREW	.07120	JOB	
2	PWMU-1-8010	REMOVE AND INSTALL PANEL	.02620	JOB	
3	PWG-4-I	DISCONNECT WIRING TO MOTOR	.00964	JOB	
4	PWMU-1-8010	PLUG AND UNPLUG UNIT	.02620	JOB	
5	PWMU-1-8552	REMOVE AND INSTALL BASE BOLTS	.08720	JOB	
6	PWMU-1-8012	REMOVE AND INSTALL MOTOR	.01760	JOB	
7	PWMU-1-8010	REMOVE AND INSTALL BELT	.02620	JOB	
8	4209	CHECK OPERATION OF MOTOR	.16700	JOB	
9	PWA-5-II	MATERIAL HANDLING	.10359	JOB	

VT-7 = .53503 HRS PER JOB

VT-8 REMOVE AND INSTALL AIR-COOLED CONDENSER OR EVAPORATOR IN A 3-10 TON PACKAGE-TYPE/SELF-CONTAINED AIR CONDITIONING SYSTEM

NO	REFERENCE	WORK UNIT DESCRIPTION	HOURS	UNITS	V38
1	PWV-3-K1	REMOVE AND INSTALL ACCESS PANEL	.22392	SYSTEM	
2	VT-4	PUMP AIR CONDITIONING SYSTEM DOWN INTO SEPARATE CYLINDER #1 CYLINDER	.27949 .07801	SYSTEM SYSTEM	
3	PWQ-19-VII	REMOVE AND INSTALL FITTING	.35608	SYSTEM	
4	PWMU-1-8010	PLUG AND UNPLUG PORT OPENING	.10480	SYSTEM	
5	PWV-1-IV	PREPARE TO REMOVE AIR COOLED CONDENSER	.17830	SYSTEM	
6	PWMU-1-8000	REMOVE AND INSTALL BOLT	.14240	SYSTEM	
7	PWMU-1-8022	REMOVE AND INSTALL CONDENSER	.20560	SYSTEM	
8	PWV-1-V	PUT AIR COOLED CONDENSER INTO OPERATION	.91673	SYSTEM	
9	VT-1	CHARGE PACKAGE-TYPE/SELF-CONTAINED AIR CONDITIONING SYSTEM AFTER REPAIR	.62145 .11367	SYSTEM SYSTEM	
10	PWA-5-II	MATERIAL HANDLING	.10359	SYSTEM	
11	PWV-1-II	CHECK OPERATION OF SYSTEM	.95211	SYSTEM	

VT-8 * 4.27614 HRS PER SYSTEM

VT-9 REMOVE AND INSTALL AIR-COOLED CONDENSER IN A 25-99 TON OPEN (CENTRAL COMPRESSION) AIR CONDITIONING SYSTEM

NO	REFERENCE	WORK UNIT DESCRIPTION	HOURS	UNITS	V38
1	VT-4	PUMP DOWN 25-99 TON SYSTEM INTO SEPARATE CYLINDERS	.27949 5.85050	J08 J08	
2	PWMU-1-8000	REMOVE AND INSTALL SCREW	.14240	J08	
3	PWMU-1-8021	REMOVE AND INSTALL PANEL	.09900	J08	
4	PWQ-19-VII	REMOVE AND INSTALL FITTING	.35608	J08	
5	PWMU-1-8010	PLUG AND UNPLUG PORT OPENINGS	.10480	J08	
6	PWV-1-IV	PREPARE TO REMOVE CONDENSER	.17830	J08	
7	PWMU-1-8000	REMOVE AND INSTALL BOLT	.14240	J08	
8	PWN-10-XII	REMOVE AND INSTALL CONDENSER	.35716	J08	
9	PWV-1-IV	PUT CONDENSER INTO OPERATION	.17830	J08	
10	VT-1	CHARGE OPEN (CENTRAL COMPRESSION) AIR CONDITIONING SYSTEM	.62145 .94725	J08 J08	
11	4211	CHECK OPERATION OF SYSTEM	.29200	J08	
12	PWA-5-II	MATERIAL HANDLING	.20718	J08	

VT-9 * 9.75530 HRS PER J08

VT-10 REMOVE AND INSTALL SHELL AND TUBE WATER COOLED CONDENSER IN A 25-99 TON AIR CONDITIONING SYSTEM.

NO	REFERENCE	WORK UNIT DESCRIPTION	HOURS	UNITS	V38
1	VT-4	PUMP SYSTEM DOWN INTO SEPARATE CYLINDERS	.27949 .70206	SYSTEM SYSTEM	
2	PWO-19-VII	REMOVE AND INSTALL FITTINGS	.71216	SYSTEM	
3	PWMU-1-8010	PLUG AND UNPLUG PORT OPENINGS	.10480	SYSTEM	
4	PWMU-1-8000	REMOVE AND INSTALL BOLT	.28480	SYSTEM	
5	PWV-1-VI	PREPARE TO REMOVE SHELL AND TUBE CONDENSER	.21122	SYSTEM	
6	PWN-10-XII	REMOVE AND INSTALL CONDENSER	.35716	SYSTEM	
7	PWV-1-VII	PUT CONDENSER INTO OPERATION	1.28537	SYSTEM	
8	VT-1	CHARGE AIR CONDITIONING SYSTEM WITH REFRIGERANT AFTER PUMPDOWN	1.86435 .34725	SYSTEM SYSTEM	
9	PWO-20-II	DRAIN AND FILL CONDENSER	.30400	SYSTEM	
10	4211	CHECK OPERATION OF SYSTEM	.29200	SYSTEM	
11	PWA-5-II	MATERIAL HANDLING	.31077	SYSTEM	

VT-10 = 7.65543 MRS PER SYSTEM

VT-11 REMOVE AND INSTALL COOLING (CHILLED WATER) OR HEATING COIL (25-99 TON AIR HANDLING SYSTEM).

NO	REFERENCE	WORK UNIT DESCRIPTION	HOURS	UNITS	V38
1	PWV-3-R1	REMOVE AND INSTALL ACCESS PANEL	.22392	SYSTEM	
2	PWV-1-VI	PREPARE TO REMOVE UNIT	.21122	SYSTEM	
3	PWO-19-VII	REMOVE AND INSTALL FITTINGS	.39608	SYSTEM	
4	PWMU-1-8352	REMOVE AND INSTALL BOLTS	.34880	SYSTEM	
5	PWN-10-XII	REMOVE AND INSTALL UNIT	.35716	SYSTEM	
6	PWV-1-VII	PUT UNIT INTO OPERATION	1.28537	SYSTEM	
7	PWV-1-II	CHECK OPERATION OF SYSTEM	.95211	SYSTEM	
8	PWA-5-II	MATERIAL HANDLING	.10359	SYSTEM	

VT-11 = 3.83823 MRS PER SYSTEM

VT-12 REMOVE AND INSTALL COOLING UNIT (EVAPORATOR) IN A 25-99 TON AIR HANDLING UNIT--DIRECT EXPANSION SYSTEM.

NO	REFERENCE	WORK UNIT DESCRIPTION	HOURS	UNITS	V38
1	PWV-3-K1	REMOVE AND INSTALL ACCESS PANEL	.22392	SYSTEM	
2	VT-3	PUMP DOWN SYSTEM INTO RECEIVER	.59128	SYSTEM	
3	PWC-19-VII	REMOVE AND INSTALL FITTING	.35608	SYSTEM	
4	PWMU-1-8010	PLUG AND UNPLUG PORT OPENINGS	.10480	SYSTEM	
5	PWV-1-IX	PREPARE TO REMOVE EVAPORATOR	.20137	SYSTEM	
6	PWMU-1-8552	REMOVE AND INSTALL BOLT	.34880	SYSTEM	
7	PWN-10-XII	REMOVE AND INSTALL EVAPORATOR	.35716	SYSTEM	
8	PWV-1-X	PUT EVAPORATOR INTO OPERATION	.53794	SYSTEM	
9	VT-1	CHARGE 25-99 TON AIR CONDITIONING SYSTEM AFTER REPAIR	.62145 .94725	SYSTEM SYSTEM	
10	PWV-1-II	CHECK OPERATION OF SYSTEM	.95211	SYSTEM	
11	PWA-5-II	MATERIAL HANDLING	.10359	SYSTEM	

VT-12 = 5.34574 MHS PER SYSTEM

VT-13 REMOVE AND INSTALL RECEIVER VALVE OR KING VALVE IN A OPEN (CENTRAL COMPRESSION) SYSTEM. AVG. 50 TON AIR CONDITIONING SYSTEM.

NO	REFERENCE	WORK UNIT DESCRIPTION	HOURS	UNITS	V38
1	PWV-1-XIII	REMOVE AND INSTALL VALVE OR RECEIVER FLANGES	.58148	SYSTEM	
2	PWN-10-XII	REMOVE AND INSTALL RECEIVER	.17898	SYSTEM	
3	PWV-1-II	CHECK OPERATION OF SYSTEM	.95211	SYSTEM	
4	VT-1	CHARGE OPEN (CENTRAL COMPRESSION) AIR CONDITIONING SYSTEM	.62145 .64413	SYSTEM SYSTEM	
5	VT-4	PUMP DOWN OPEN (CENTRAL COMPRESSION) AIR CONDITIONING SYSTEM	.27949 .70206	SYSTEM SYSTEM	

VT-13 = 3.95929 MHS PER SYSTEM

VT-14 REMOVE AND INSTALL THERMOSTATIC EXPANSION VALVE IN A 25 TO 99 TON OPEN (CENTRAL COMPRESSION) AIR CONDITIONING SYSTEM.

NO	REFERENCE	WORK UNIT DESCRIPTION	HOURS	UNITS	V38
1	VT-3	PUMP DOWN SYSTEM INTO RECEIVER	.59128	SYSTEM	
2	PWQ-19-VII	REMOVE AND INSTALL FITTING	.53412	SYSTEM	
3	PWMU-1-8010	PLUG AND UNPLUG PORT OPENINGS	.15720	SYSTEM	
4	PWV-1-XI *	PREPARE TO REMOVE EXPANSION VALVE	.35892	SYSTEM	
5	PWMU-1-8011	REMOVE AND INSTALL EXPANSION VALVE	.07320	SYSTEM	
6	PWV-1-XII	PUT EXPANSION VALVE INTO OPERATION	.23417	SYSTEM	
7	VT-1	CHARGE OPEN (CENTRAL COMPRESSION) AIR CONDITIONING SYSTEM	.62145 .94725	SYSTEM SYSTEM	
8	4211	CHECK OPERATION OF SYSTEM	.29288	SYSTEM	
9	PWA-5-II	MATERIAL HANDLING	.10359	SYSTEM	

VT-14 * 3.91277 MHS PER SYSTEM

VT-15 REMOVE AND INSTALL STRAINER OR DRYER IN A 25-99 TON OPEN (CENTRAL COMPRESSION) AIR CONDITIONING SYSTEM.

NO	REFERENCE	WORK UNIT DESCRIPTION	HOURS	UNITS	V38
1	VT-3	PUMP SYSTEM DOWN INTO RECEIVER	.59128	COMPONENT	
2	PWMU-1-8000	REMOVE AND INSTALL SCREWS	.21360	COMPONENT	
3	PWV-1-XV	PREPARE TO REMOVE DRYER/STRAINER	.34466	COMPONENT	
4	PWMU-1-8011	REMOVE AND INSTALL DRYER/STRAINER	.07320	COMPONENT	
5	PWMU-1-8010	REMOVE AND INSTALL DRYER/STRAINER INSERT	.07860	COMPONENT	
6	PWV-1-XVI	PUT DRYER/STRAINER INTO OPERATION	.26959	COMPONENT	
7	PWA-5-I	MATERIAL HANDLING	.06906	COMPONENT	

VT-15 * 1.63999 MHS PER COMPONENT

VT-16 INSTALL NEW WINDOW AIR CONDITIONER (1/2-2 TONS) IN WINDOW WITH RAISABLE SASH.

NO	REFERENCE	WORK UNIT DESCRIPTION	HOURS	UNITS	V38
1	PWMU-1-8021	REMOVE CARDBOARD CONTAINER	.02450	JOB	
2	PWMU-1-8000	REMOVE AND INSTALL SCREWS	.12460	JOB	
3	PWMU-1-8010	REMOVE AND INSTALL PANEL	.02620	JOB	
4	PWN-10-XII	REMOVE AND INSTALL UNIT IN CABINET	.35716	JOB	
5	PWMU-1-8552	REMOVE BOLT FROM CRATE	.04360	JOB	
6	PWMU-1-8005	RAISE AND LOWER WINDOW	.00480	JOB	
7	PWMU-1-8021	INSTALL CABINET IN WINDOW	.02450	JOB	
8	PWMU-1-8552	INSTALL LEVELING ARM	.08720	JOB	
9	PWMU-1-8553	LOOSEN AND TIGHTEN LEVELING SCREW	.03480	JOB	
10	PWMU-1-8100	MEASURE, MARK AND CUT FILLER PANEL	.00202 .05330	JOB JOB	
11	PWMU-1-8010	INSTALL FILLER PANEL	.02620	JOB	
12	PWMU-1-8010	INSTALL WEATHER STRIPPING	.03930	JOB	
13	PWMU-1-8005	INSTALL CAULKING	.01200	JOB	
14	PWMU-1-8010	INSTALL PLUG	.01310	JOB	
15	4211	CHECK OPERATION OF UNIT	.29200	JOB	
16	PWA-5-II	MATERIAL HANDLING	.31077	JOB	

VT-16 = 1.47525 MHS PER JOB

VT-17 REMOVE WINDOW AIR CONDITIONER (1/2-2 TONS) FROM RAISABLE WINDOW.

NO	REFERENCE	WORK UNIT DESCRIPTION	HOURS	UNITS	V38
1	PWMU-1-8000	REMOVE FACE PANEL SCREWS	.07120	JOB	
2	PWMU-1-8010	REMOVE FACE PANEL	.01310	JOB	
3	PWN-10-XII	REMOVE UNIT FROM CABINET	.17858	JOB	
4	PWMU-1-8005	RAISE AND LOWER WINDOW	.00480	JOB	
5	PWMU-1-801	REMOVE WEATHER STRIPPING	.01310	JOB	
6	PWMU-1-8010	REMOVE FILLER PANEL	.02620	JOB	
7	PWMU-1-8553	LOOSEN LEVELING SCREW	.01740	JOB	
8	PWMU-1-8021	REMOVE CABINET FROM WINDOW	.02450	JOB	
9	PWMU-1-8022	INSTALL UNIT IN CABINET	.10280	JOB	
10	PWMU-1-8010	INSTALL FACE PANEL	.01310	JOB	
11	PWMU-1-8000	INSTALL SCREWS	.07120	JOB	
12	PWA-5-I	MATERIAL HANDLING	.06906	JOB	

VT-17 = .60424 MHS PER JOB

VT-18 REMOVE SOLID BEARING AND INSTALL SPLIT TYPE BEARING ON CENTRIPUGAL (SQUIRREL CAGE) FAN SHAFT.

NO	REFERENCE	WORK UNIT DESCRIPTION	HOURS	UNITS	*38
1	PWMU-1-8000	REMOVE AND INSTALL SCREW	.10680	JOB	
2	PWMU-1-8012	REMOVE AND INSTALL ACCESS PANEL	.03560	JOB	
3	PWMU-1-8552	REMOVE AND INSTALL OIL FILLER TUBE	.04360	JOB	
4	PWMU-1-8000	REMOVE AND INSTALL BOLT	.03560	JOB	
5	PWMU-1-8012	REMOVE AND INSTALL BEARING CAP	.01780	JOB	
6	PWMU-1-8000	LOOSEN AND TIGHTEN BEARING RETAINER BOLT	.01760	JOB	
7	PWMU-1-8011	MOVE BEARING DOWN SHAFT	.03660	JOB	
8	PWMU-1-8000	REMOVE AND INSTALL HOUSING NUTS	.07120	JOB	
9	PWMU-1-8005	REMOVE AND INSTALL HOUSING BOLTS	.01600	JOB	
10	PWMU-1-8012	REMOVE AND INSTALL BEARING HOUSING	.01780	JOB	
11	PWEA-4-I	BURN HOUSING WITH TORCH	.00960 .04035	JOB JOB	
12	PWMU-1-8000	REMOVE AND INSTALL BEARING NUTS	.07120	JOB	
13	PWMU-1-8005	REMOVE AND INSTALL BEARING BOLTS	.01600	JOB	
14	PWEA-4-II	BURN HOLES FOR HOUSING BOLTS	.10480 .05380	JOB JOB	
15	PWN-3-VII	FILL OIL FILLER TUBE WITH OIL	.07887 .28960	JOB JOB	
16	4208	CHECK OPERATION FOR BEARING	.04200	JOB	
17	PWA-5-I	MATERIAL HANDLING	.13912	JOB	

VT-18 * 1.24314 HRS PER JOB

VT-19 DRAIN, REMOVE AND INSTALL END PLATES, PUNCH TUBES, AND FILL ABSORBER OR GENERATOR IN 100 TON ABSORPTION SYSTEM.USE LADDER.

NO	REFERENCE	WORK UNIT DESCRIPTION	HOURS	UNITS	*38
1	PWQ-19-VIII	REMOVE AND INSTALL PIPE FITTINGS	.94868	JOB	
2	PWQ-20-II	DRAIN AND FILL TUBES	.76000	JOB	
3	PWMU-1-8553	REMOVE AND INSTALL NUT	1.11360	JOB	
4	PWN-10-XII	REMOVE AND INSTALL END PLATES	.71432	JOB	
5	PWV-13-II	PUNCH 220 TUBES UP TO 14' LONG AND 1" O.D.	.02408 2.90400	JOB JOB	
6	PWN-19-II	CUT GASKET @ AVG. OF 2 GASKETS	.01564 .18508	JOB JOB	
7	PWN-19-X5	PUNCH HOLES IN GASKET	.00201 .23646	JOB JOB	
8	PWMU-1-8010	INSTALL GASKET	.02620	JOB	
9	PWA-5-II	MATERIAL HANDLING	.41436	JOB	
10	PWMU-1-8052	GET, ASCEND, DESCEND, AND ASIDE LADDER	.04140	JOB	

VT-19 * 6.98584 HRS PER JOB

VT-20 DRAIN, REMOVE AND INSTALL END PLATES, PUNCH TUBES, AND FILL ABSORBER OR GENERATOR IN 300 TON ABSORPTION SYSTEM. USE LADDER.

NO	REFERENCE	WORK UNIT DESCRIPTION	HOURS	UNITS	V38
1	PWG-19-VIII	REMOVE AND INSTALL PIPE FITTING	.54868	JOB	
2	PWG-20-II	DRAIN AND FILL TUBES	1.90000	JOB	
3	PWMU-1-8552	REMOVE AND INSTALL NUT	1.39520	JOB	
4	PWN-10-XV	REMOVE AND INSTALL END PLATES	1.36640	JOB	
5	PWV-13-II	PUNCH TUBES UP TO 25' LONG AND 1" O.D.	.02408 5.28000	JOB JOB	
6	PWN-19-II	CUT AVG. OF 2 GASKETS	.01564 .18508	JOB JOB	
7	PWN-19-X5	PUNCH 32 HOLES IN GASKET	.00201 .23648	JOB JOB	
8	PWMU-1-8010	INSTALL GASKET	.02620	JOB	
9	PWA-5-II	MATERIAL HANDLING	.41436	JOB	
10	PWMU-1-8052	GET, ASCEND, DESCEND, AND ASIDE LADDER	.04140	JOB	

VT-20 = 11.43553 HRS PER JOB

VT-21 REMOVE AND INSTALL DISPOSABLE TYPE FILTER IN INDIVIDUAL OVERHEAD UNIT-- LADDER USED.

NO	REFERENCE	WORK UNIT DESCRIPTION	HOURS	UNITS	V38
1	PWMU-1-8000	REMOVE AND INSTALL NUT OR SCREW	.07120	JOB	
2	PWMU-1-8012	REMOVE AND INSTALL PANEL	.01780	JOB	
3	PWMU-1-8012	REMOVE AND INSTALL FILTER	.01780	JOB	
4	PWA-5-II	MATERIAL HANDLING	.10359	JOB	
5	PWMU-1-8052	GET, ASCEND, DESCEND, AND ASIDE LADDER	.02070	JOB	

VT-21 = .23109 HRS PER JOB

VT-22 REMOVE AND INSTALL A SET OF THREE BELTS ON A COMPRESSOR IN A OPEN (CENTRAL COMPRESSION) AIR CONDITIONING SYSTEM.

NO	REFERENCE	WORK UNIT DESCRIPTION	HOURS	UNITS	V38
1	2388	TURN POWER ON AND OFF	.00258	SYSTEM	
2	PWMU-1-8000	REMOVE AND INSTALL SCREWS ON BELT GUARD	.07120	SYSTEM	
3	PWMU-1-8021	REMOVE AND INSTALL BELT GUARD	.04900	SYSTEM	
4	PWMU-1-8553	LOOSEN AND TIGHTEN MOTOR BASE BOLTS	.06960	SYSTEM	
5	PWMU-1-8553	LOOSEN AND TIGHTEN ADJUSTING SCREW	.05220	SYSTEM	
6	PWMU-1-8011	PRY MOTOR TO LOOSEN AND TIGHTEN	.07320	SYSTEM	
7	PWMU-1-8021	REMOVE AND INSTALL BELTS	.14700	SYSTEM	
8	4209	CHECK OPERATION	.16700	SYSTEM	
9	PWA-5-I	MATERIAL HANDLING	.06906	SYSTEM	

VT-22 = .70084 MHS PER SYSTEM

VT-23 REMOVE AND INSTALL FLOAT LINKAGE IN WATER TOWER OR CONDENSER.

NO	REFERENCE	WORK UNIT DESCRIPTION	HOURS	UNITS	V38
1	PWMU-1-8000	REMOVE AND INSTALL SCREW	.14240	JOB	
2	PWMU-1-8011	REMOVE AND INSTALL PANEL	.07320	JOB	
3	PWMU-1-8013	REMOVE AND INSTALL FLOAT ASSEMBLY	.04620	JOB	
4	5601	ADJUST FLOAT LINKAGE	.08000	JOB	
5	4209	CHECK OPERATION	.16700	JOB	

VT-23 = .50880 MHS PER JOB

VT-24 INSTALL NEW WINDOW AIR CONDITIONING UNIT (1/2 TO 3 TONS) IN FIXED STEEL SASH WINDOW.

NO	REFERENCE	WORK UNIT DESCRIPTION	HOURS	UNITS	V38
1	PWMU-1-8021	REMOVE CARDBOARD CONTAINER	.02450	JOB	
2	PWMU-1-8000	REMOVE AND INSTALL SCREWS	.12460	JOB	
3	PWMU-1-8010	REMOVE AND INSTALL PANEL	.02620	JOB	
4	PWN-10-XII	REMOVE AND INSTALL UNIT IN CABINET	.35716	JOB	
5	PWEA-52-I	LAYOUT AREA TO BE REMOVED FROM WINDOW	.20040	JOB	
6	PWMU-1-8013	REMOVE WINDOW PANES	.13860	JOB	
7	PWEA-4-III	CUT FRAME WITH TORCH	.00960 .02490	JOB JOB	
8	PWMU-1-8552	REMOVE BOLT FROM CRATE	.04360	JOB	
9	PWMU-1-8000	INSTALL MOUNTING FRAME	.03560	JOB	
10	PWMU-1-8021	INSTALL CABINET IN WINDOW	.02450	JOB	
11	PWMU-1-8552	INSTALL LEVELING ARM	.08720	JOB	
12	PWMU-1-8553	LOOSEN AND TIGHTEN LEVELING SCREW	.03480	JOB	
13	PWMU-1-8100	MEASURE, MARK AND CUT FILLER PANEL	.00202 .07995	JOB JOB	
14	PWMU-1-8010	INSTALL FILLER PANEL	.03930	JOB	
15	PWMU-1-8010	INSTALL WEATHER STRIPPING	.03930	JOB	
16	PWMU-1-8005	INSTALL CAULKING	.01200	JOB	
17	PWMU-1-8010	INSTALL PLUG	.01310	JOB	
18	PWMU-1-8000	SECURE PANELS TO WINDOW	.08900	JOB	
19	4211	CHECK OPERATION OF UNIT	.58400	JOB	
20	5607	ADJUST UNIT	.10200	JOB	
21	PWA-9-I	MATERIAL HANDLING	.13612	JOB	

VT-24 = 2.23044 MHS PER JOB

VT-25

NO	REFERENCE	WORK UNIT DESCRIPTION	HOURS	UNITS	V38
1	PWQ-19-VIII	[illegible]	[illegible]	JOB	
2	PWQ-20-II	[illegible]	[illegible]	JOB	
3	PWMU-1-8552	[illegible]	[illegible]	JOB	
4	PWN-10-XII	[illegible]	[illegible]	JOB	
5	PWV-13-I	[illegible]	.01429 .74800	JOB JOB	
6	PWV-13-I	[illegible]	.02408 .74800	JOB JOB	
7	PWN-19-II	CUT 2 GASKETS UP TO 2 SQ. FT., EACH	.01564 .18509	JOB JOB	
8	PWN-19-XS	MARK AND PUNCH 32 HOLES IN GASKET	.00201 .23648	JOB JOB	
9	PWMU-1-8010	INSTALL GASKETS	.02620	JOB	
10	PWA-5-II	MATERIAL HANDLING	.41436	JOB	

VT-25 * 5.0697 HRS PER JOB

VT-26 SEASONAL (FALL) OPERATION--SHUT DOWN AIR HANDLING UNITS COOLING INLET.

NO	REFERENCE	WORK UNIT DESCRIPTION	HOURS	UNITS	V38
1	PWMU-1-8000	[illegible]	[illegible]	JOB	
2	PWMU-1-8012	[illegible]	[illegible]	JOB	
3	PWG-40-XI	[illegible]	[illegible]	JOB	
4	PWG-40-I	[illegible]	[illegible]	JOB	
5	PWG-40-XIII	[illegible]	[illegible]	JOB	
6	5603	[illegible]	[illegible]	JOB	

VT-26 * .46960 HRS PER JOB

VT-27 SEASONAL (FALL) OPERATION--SHUT DOWN COMPRESSOR.

NO	REFERENCE	WORK UNIT DESCRIPTION	HOURS	UNITS	V38
1	PWV-1-VIII	PREPARE AND PUMP DOWN SYSTEM INTO RECEIVER	.40060	JOB	
2	4205	CHECK SYSTEM FOR LEAKS AND NOTE	.06300	JOB	
3	5603	TURN SWITCH OFF	.02100	JOB	
4	PWG-40-XII	FILL OUT INSPECTORS REPORT	.01185	JOB	

VT-27 * .49665 HRS PER JOB

VT-28

NO.	REFERENCE	WORK UNIT DESCRIPTION	HOURS	UNITS	VSU
1	PWMU-1-8000	REMOVE AND INSTALL SCREW	.54084	JOB	
2	PWG-40-II	DRAIN AND FILL TUBE	.68428	JOB	
3	PWMU-1-8000	REMOVE AND INSTALL NUT	1.13362	JOB	
4	PWH-10-EE	REMOVE AND INSTALL COVER PLATE	.71432	JOB	
5	PWH-13-II	PUNCH CLEAN TUBE UP TO 29° LONG, UP TO 1" O.D.	.02409 2.31000	JOB JOB	
6	PWH-13-II	DRY TUBE WITH RAG	.02408 2.31000	JOB JOB	
7	PWH-19-II	CUT 2 GASKETS OVER 2 SQ. FT.	.01564 .19508	JOB JOB	
8	PWH-19-KI	MARK AND PUNCH 32 HOLES IN GASKET	.00201 .23648	JOB JOB	
9	PWMU-1-8010	INSTALL GASKET	.02622	JOB	
10	PWA-5-II	MATERIAL HANDLING	.41436	JOB	

VT-28 = 5.42852 HRS PER JOB

VT-29

NO.	REFERENCE	WORK UNIT DESCRIPTION	HOURS	UNITS	VSU
1	PWMU-1-8000	REMOVE AND INSTALL SCREW	.21360	JOB	
2	PWMU-1-8011	REMOVE AND INSTALL PANEL	.24048	JOB	
3	PWG-40-KI	SENSORY INSPECT BEARINGS	.08420	JOB	
4	2148	DRAIN WATER	.49000	JOB	
5	5603	TURN SWITCH OFF	.02100	JOB	
6	PWG-40-XII	FILL OUT INSPECTOR REPORT	.01185	JOB	

VT-29 = .96705 HRS PER JOB

[illegible]

[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
1)	[illegible]	[illegible]	.19888	JOB
2)	[illegible]	[illegible]	.27920	JOB
3)	[illegible]	[illegible]	.08420	JOB
4)	[illegible]	[illegible]	.27550	JOB
5)	[illegible]	[illegible]	.01375	JOB
6)	[illegible]	[illegible]	.02100	JOB

[illegible] = .37269 HRS PER JOB

V7-31 SEASONAL (FALL) OPERATION--SHUT DOWN AIR COOLED CONDENSER; PER FAN ASSEMBLY.

NO	REFERENCE	WORK UNIT DESCRIPTION	HOURS	UNITS	V30
1	PWMU-1-0000	REMOVE AND INSTALL SCREEN	.14240	JOB	
2	PWMU-1-0011	REMOVE AND INSTALL PANEL	.27920	JOB	
3	PWG-40-XI	SENSORY INSPECT BEARINGS	.08420	JOB	
4	PWG-40-XIII	FILL OUT INSPECTOR REPORT	.01375	JOB	
5	5603	TURN OFF SWITCH	.02100	JOB	

V7-31 = .38405 HRS PER JOB

V7-32 SEASONAL (FALL) OPERATION--SHUT DOWN WOOD COOLING TOWER (200-299 TONS OR METAL COOLING TOWER (100-199 TONS.

NO	REFERENCE	WORK UNIT DESCRIPTION	HOURS	UNITS	V30
1	PWMU-1-0000	REMOVE AND INSTALL SCREEN	.28480	JOB	
2	PWMU-1-0011	REMOVE AND INSTALL SCREEN	.29280	JOB	
3	PWG-40-XI	SENSORY INSPECT BEARIWGS AND GEAR BOXES	.50520	JOB	
4	PWV-2-IV	PREPARE TOWER TO DRAIN	.08732	JOB	
5	5603	TURN OFF POWER	.02100	JOB	
6	PWG-40-XIII	FILL OUT INSPECTOR REPORT	.01375	JOB	

V7-32 = 1.20487 HRS PER JOB

VT-32 [illegible]

NO	REFERENCE	WORK UNIT DESCRIPTION	HOURS	UNITS	VOL
1	PWMU-1-8009	REMOVE AND INSTALL SCREEN	.19260	JOB	
2	PWMU-1-8011	REMOVE AND INSTALL SCREEN	.19660	JOB	
3	PWG-40-A1	SENSORY INSPECT BEARING AND GEAR NOISE	.29260	JOB	
4	PWM-2-IX	PREPARE TOWER TO DRAIN	.08752	JOB	
5	5603	TURN OFF POWER	.02100	JOB	
6	PWG-40-A111	FILL OUT INSPECTOR REPORT	.01375	JOB	

VT-33 = .60347 MHS PER JOB

VT-34 SEASONAL (FALL) OPERATION--SHUT DOWN PACKAGE UNIT (12-49 TON).

NO	REFERENCE	WORK UNIT DESCRIPTION	HOURS	UNITS	VOL
1	PWMU-1-8009	REMOVE AND INSTALL SCREEN	.10680	JOB	
2	PWMU-1-8011	REMOVE AND INSTALL PANEL	.07920	JOB	
3	PWM-1-A111	PREPARE AND RUN COMPRESSOR TO PUMP DOWN INTO RECEIVER	.40080	JOB	
4	PWG-40-A1	SENSORY INSPECT BEARINGS	.10440	JOB	
5	5603	TURN POWER OFF	.02100	JOB	
6	PWG-40-A111	FILL OUT INSPECTOR REPORT	.01375	JOB	

VT-34 = .74285 MHS PER JOB

VT-35 SEASONAL (FALL) OPERATION--SHUT DOWN WINDOW AIR CONDITIONING UNIT

NO	REFERENCE	WORK UNIT DESCRIPTION	HOURS	UNITS	VOL
1	3842	WALK AROUND WORK AREA TO DIFFERENT LOCATION	.01500	JOB	
2	2581	LOCATE UNIT IN COMPARTMENT AND VISUALLY INSPECT	.00464	JOB	
3	2389	TURN OFF SWITCH	.00103	JOB	
4	2235	UNPLUG UNIT FROM POWER SOURCE	.00099	JOB	
5	2648	TIE UP ELECTRICAL CORD	.00185	JOB	
6	PWMU-1-8052	INSTALL, ASCEND, DESCEND AND REMOVE STEP LADDER	.02078	JOB	
7	5523	OBTAIN AND ASIDE COVER AND ROLL OF TAPE	.01486	JOB	
8	PWMU-1-8012	PLACE COVER OVER UNIT	.00890	JOB	
9	4818	TAPE EDGES OF COVER	.10459	JOB	
10	PWG-40-A11	FILL OUT RECORD SHEET	.01185	JOB	

VT-35 = .28432 MHS PER JOB

VT-36 RECURRING MAINTENANCE--WINDOW AIR CONDITIONING UNIT

NO	REFERENCE	WORK UNIT DESCRIPTION	HOURS	UNITS	V38
1	PWMU-1-8000	REMOVE AND INSTALL SCREW	.08900	JOB	
2	PWMU-1-8021	REMOVE AND INSTALL PANEL	.04900	JOB	
3	PWG-40-XI	SENSORY INSPECT BEARINGS	.08420	JOB	
4	PWMU-1-8010	REMOVE AND INSTALL DISPOSABLE FILTER	.01310	JOB	
5	PWG-40-XII	FILL OUT INSPECTION REPORT	.01185	JOB	

VT-36 = .24715 HRS PER JOB

VT-37 RECURRING MAINTENANCE--PACKAGE-TYPE AIR CONDITIONING SYSTEM (10-49 TON).

NO	REFERENCE	WORK UNIT DESCRIPTION	HOURS	UNITS	V38
1	PWMU-1-8000	REMOVE AND INSTALL SCREW	.21360	JOB	
2	PWMU-1-8011	REMOVE AND INSTALL PANEL	.14640	JOB	
3	PWG-40-I	GREASE BLOWER BEARING FITTINGS	.02420	JOB	
4	PWG-40-II	LUBRICATE OIL CUP	.03516	JOB	
5	PWG-40-X	SENSORY INSPECT MOTOR	.02193	JOB	
6	PWG-40-XI	SENSORY INSPECT BLOWER	.04210	JOB	
7	PWMU-1-8028	WIPE COMPRESSOR AND MOTOR	.16880	JOB	
8	PWMU-1-8032	INSPECT SIGHT GLASS	.00790	JOB	
9	4210	INSPECT FOR LEAKS	.22500	JOB	
10	PWMU-1-8021	REMOVE AND INSTALL DISPOSABLE FILTER	.09800	JOB	
11	5607	ADJUST FAN ASSEMBLY MOTOR PULLEY	.10200	JOB	
12	PWN-3-VII	ADD OIL TO CRANKCASE	.07887 .02896	JOB JOB	
13	PWG-40-XIII	FILL OUT INSPECTION REPORT	.01375	JOB	

VT-37 = 1.20667 HRS PER JOB

VT-38 RECURRING MAINTENANCE--AIR HANDLING UNIT(3-24 TON) --INCLUDES INSPECT, LUBRICATE AND ADJUSTMENT

NO	REFERENCE	WORK UNIT DESCRIPTION	HOURS	UNITS	V38
1	PWMU-1-8003	REMOVE AND INSTALL SCREW	.28480	JOB	
2	PWMU-1-8012	REMOVE AND INSTALL PANEL	.03560	JOB	
3	PWG-40-XI	SENSORY INSPECTION FAN MOTOR	.08420	JOB	
4	PWG-40-I	GREASE BEARINGS	.02420	JOB	
5	5604	ADJUST BELT TENSION	.07100	JOB	
6	PWMU-1-8010	REMOVE AND INSTALL DISPOSABLE FILTER	.05240	JOB	
7	PWG-40-XIII	FILL OUT INSPECTION REPORT	.01375	JOB	

VT-38 = .36593 HRS PER JOB

VT-39 RECURRING MAINTENANCE--AIR-COOLED CONDENSER: PER FAN ASSEMBLY.

NO	REFERENCE	WORK UNIT DESCRIPTION	HOURS	UNITS	V38
1	PWMU-1-8000	REMOVE AND INSTALL SCREW	.24920	JOB	
2	PWMU-1-8011	REMOVE AND INSTALL PANEL	.14640	JOB	
3	PWG-40-I	LUBRICATE BEARINGS	.02420	JOB	
4	5607	ADJUST BELT TENSION	.10200	JOB	
5	PWG-40-XI	SENSORY INSPECT FAN AND MOTOR	.08420	JOB	
6	PWG-40-XII	FILL OUT INSPECTOR REPORT	.01185	JOB	

VT-39 = .61785 HRS PER JOB

VT-40 RECURRING MAINTENANCE--EVAPORATIVE COOLER OR METAL COOLING TOWER (3-24 TON).

NO	REFERENCE	WORK UNIT DESCRIPTION	HOURS	UNITS	V38
1	PWMU-1-8000	REMOVE AND INSTALL SCREW	.21360	JOB	
2	PWMU-1-8011	REMOVE AND INSTALL PANEL	.14640	JOB	
3	PWG-40-I	LUBRICATE BEARINGS, FAN, MOTORS, AND PUMP	.03630	JOB	
4	5607	ADJUST BELT TENSION	.10200	JOB	
5	5601	ADJUST FLOAT	.04000	JOB	
6	PWG-40-XI	SENSORY INSPECT BEARINGS	.12630	JOB	
7	PWG-40-XIII	FILL OUT INSPECTOR REPORT	.01375	JOB	

VT-40 = .67835 HRS PER JOB

VT-41 RECURRING MAINTENANCE--AIR OR WATER-COOLED PACKAGE TYPE/SELF-CONTAINED AIR CONDITIONING SYSTEM (3-9 TON).

NO	REFERENCE	WORK UNIT DESCRIPTION	HOURS	UNITS	V38
1	PWMU-1-8000	REMOVE AND INSTALL SCREW	.21360	JOB	
2	PWMU-1-8021	REMOVE AND INSTALL PANEL	.01800	JOB	
3	PWG-40-I	GREASE BLOWER BEARING FITTING	.01815	JOB	
4	PWG-40-II	LUBRICATE OIL CUP	.02364	JOB	
5	PWG-40-X	SENSORY INSPECT FAN	.02193	JOB	
6	PWG-40-XI	SENSORY INSPECT BLOWER	.04210	JOB	
7	PWMU-1-8028	WIPE MOTOR AND CONDENSER	.16880	JOB	
8	PWMU-1-8032	INSPECT SIGHT GLASS	.00790	JOB	
9	4210	INSPECT FOR LEAKS	.07500	JOB	
10	PWMU-1-8010	REMOVE AND INSTALL DISPOSABLE FILTER	.05240	JOB	
11	PWG-40-XIII	FILL OUT INSPECTION REPORT	.01375	JOB	

VT-41 = .73507 MRS PER JOB

VT-42 RECURRING MAINTENANCE--COMPRESSOR--OPEN (CENTRAL COMPRESSION) AIR CONDITIONING SYSTEM. (3-24 TON SYSTEM)

NO	REFERENCE	WORK UNIT DESCRIPTION	HOURS	UNITS	V38
1	PWMU-1-8028	WIPE COMPRESSOR AND MOTOR	.16680	JOB	
2	5607	ADJUST BELT TENSION	.10200	JOB	
3	PWMU-1-8032	INSPECT SIGHT GLASS AND GAGES	.02370	JOB	
4	PWG-40-I	LUBRICATE BEARINGS	.01210	JOB	
5	PWM-3-VII	ADD OIL	.07887 .01448	JOB JOB	
6	4210	INSPECT FOR LEAKS	.07500	JOB	
7	4211	CHECK FOR PROPER OPERATION	.29200	JOB	
8	PWG-40-XIII	FILL OUT INSPECTION REPORT	.01375	JOB	

VT-42 = .75070 MRS PER JOB

VT-43 CLEAN AND LUBRICATE WINDOW AIR CONDITIONING UNIT. --INCLUDES REMOVE AND INSTALL PANEL; CLEAN INSIDE CABINET; LUBRICATE BEARING; INSPECT PAN AND BLOWER; REPLACE DISPOSABLE FILTER.

NO	REFERENCE	WORK UNIT DESCRIPTION	HOURS	UNITS	V38
1	PWMU-1-8000	REMOVE AND INSTALL SCREW	.08900	JOB	
2	PWMU-1-8021	REMOVE AND INSTALL PANEL	.04900	JOB	
3	PWN-10-XII	PULL UNIT PARTIALLY INSIDE WINDOW AND SLIP BACK	.39716	JOB	
4	PWMU-1-8028	CLEAN UNIT INSIDE CABINET	.08440	JOB	
5	PWG-40-I	GREASE BLOWER BEARING FITTING	.01210	JOB	
6	PWG-40-II	LUBRICATE OIL CUP	.02344	JOB	
7	PWG-40-X	SENSORY INSPECT PAN	.02193	JOB	
8	PWG-40-XI	SENSORY INSPECT BLOWER	.04210	JOB	
9	PWMU-1-8010	REMOVE AND INSTALL DISPOSABLE FILTER	.02620	JOB	
10	PWA-5-II	MATERIAL HANDLING	.20718	JOB	

VT-43 = .91251 HRS PER JOB

VT-44 RECURRING MAINTENANCE--COMPRESSOR--OPEN (CENTRAL COMPRESSION) AIR CONDITIONING SYSTEM (25 TON AND OVER SYSTEM)

NO	REFERENCE	WORK UNIT DESCRIPTION	HOURS	UNITS	V38
1	PWMU-1-8026	WIPE COMPRESSOR AND MOTOR	.16880	JOB	
2	5608	CHECK MOTOR ALIGNMENT AND ADJUST	.18800	JOB	
3	PWMU-1-8032	INSPECT SIGHT GLASS AND GAUGES	.03160	JOB	
4	PWG-40-I	LUBRICATE BEARINGS	.03630	JOB	
5	PWN-3-VII	ADD OIL	.07887 .01448	JOB JOB	
6	PWG-20-II	DRAIN AIR TANK	.01520	JOB	
7	4210	INSPECT FOR LEAKS	.19000	JOB	
8	4211	CHECK FOR PROPER OPERATION	.29200	JOB	
9	PWG-40-XIII	FILL OUT INSPECTOR REPORT	.01375	JOB	

VT-44 = .99900 HRS PER JOB

VT-45 RECURRING MAINTENANCE--EVAPORATIVE CONDENSER OR METAL COOLING TOWER (25 TON AND OVER AIR CONDITIONING SYSTEM)

NO	REFERENCE	WORK UNIT DESCRIPTION	HOURS	UNITS	VSE
1	PWMU-1-8000	REMOVE AND INSTALL SCREW	.32040	JOB	
2	PWMU-1-8011	REMOVE AND INSTALL PANEL	.29280	JOB	
3	PWG-40-I	LUBRICATE BEARINGS, FAN, MOTOR AND PUMP	.07260	JOB	
4	5607	ADJUST BELT TENSION	.10200	JOB	
5	5601	ADJUST FLOAT	.04000	JOB	
6	PWG-40-XI	SENSORY INSPECT BEARINGS	.25260	JOB	
7	PWG-40-XIII	FILL OUT INSPECTOR REPORT	.01373	JOB	

VT-45 * 1.09415 MHS PER JOB

VT-46 CLEAN, INSPECT, ADJUST AND LUBRICATE PACKAGE-TYPE/SELF-CONTAINED AIR CONDITIONING SYSTEM (3-49 TON) --INCLUDES REMOVE AND INSTALL PANELS; CLEAN INTERIOR AND CENTRIFUGAL (SQUIRREL CAGE) FAN; INSPECT; MAKE ADJUSTMENTS; LUBRICATE MOVING PARTS; AND CHARGE SYSTEM.

NO	REFERENCE	WORK UNIT DESCRIPTION	HOURS	UNITS	VSE
1	PWMU-1-8000	REMOVE AND INSTALL SCREW	.21360	JOB	
2	PWMU-1-8011	REMOVE AND INSTALL PANEL	.14640	JOB	
3	PWG-40-I	LUBRICATE BLOWER BEARINGS	.02620	JOB	
4	PWG-40-II	LUBRICATE OIL CUP	.03516	JOB	
5	PWG-40-X	SENSORY INSPECT PUMP	.02193	JOB	
6	PWG-40-XI	SENSORY INSPECT BLOWER	.04210	JOB	
7	PWG-40-XXI	CLEAN SQUIRREL CAGE FAN	.25082	JOB	
8	PWMU-1-8028	WIPE MOTOR AND COMPRESSOR	.16980	JOB	
9	PWMU-1-8031	BRUSH COOLING COILS	.27400	JOB	
10	PWMU-1-8032	INSPECT SIGHT GLASS	.00790	JOB	
11	4210	INSPECT FOR LEAKS	.22500	JOB	
12	PWMU-1-8021	REMOVE AND INSTALL DISPOSABLE FILTER	.09600	JOB	
13	PWMU-1-8011	REMOVE AND INSTALL BELT	.07320	JOB	
14	5607	ADJUST PULLEY	.10200	JOB	
15	VT-1	CHARGE PACKAGE-TYPE/SELF-CONTAINED AIR CONDITIONING SYSTEM REPAIR	.02148 .37890	JOB JOB	
16	VT-2	PUMP DOWN COMPRESSOR	.38220	JOB	
17	PWM-3-V	ADD OIL TO CRANKCASE	.02265 .02731	JOB JOB	
18	PWMU-1-8031	CLEAN INTERIOR CABINET BY SCRAPING AND WIPING	.27400	JOB	

VT-46 * 3.39761 MHS PER JOB

VT-47 RECURRING MAINTENANCE--WOOD COOLING TOWER (25-99 TON AIR CONDITIONING SYSTEM)

NO	REFERENCE	WORK UNIT DESCRIPTION	HOURS	UNITS	V38
1	PWMU-1-8000	REMOVE AND INSTALL SCREW	.14240	JOB	
2	PWMU-1-8011	REMOVE AND INSTALL SCREEN	.14640	JOB	
3	PWG-40-XV	CLEAN FAN	.04911	JOB	
4	PWG-34-II	CLEAN, LUBRICATE, INSPECT AND ADJUST MOTOR	.04810	JOB	
5	PWG-40-VI	ADD OIL TO GEAR BOX	.01428	JOB	
6	PWMU-1-8000	REMOVE AND INSTALL GEAR BOX PLUG	.01780	JOB	
7	5607	ADJUST BELT TENSION	.10200	JOB	
8	PWG-40-I	LUBRICATE FAN AND PUMP	.03630	JOB	
9	PWG-40-XI	SENSORY INSPECT BEARINGS	.12630	JOB	
10	5601	ADJUST FLOAT ASSEMBLY	.04000	JOB	
11	PWG-40-XIII	FILL OUT INSPECTOR REPORT	.01375	JOB	

VT-47 = .73644 HRS PER JOB

VT-48 RECURRING MAINTENANCE--WOOD COOLING TOWER (500-999 TON AIR CONDITIONING SYSTEM)

NO	REFERENCE	WORK UNIT DESCRIPTION	HOURS	UNITS	V38
1	PWMU-1-8000	REMOVE AND INSTALL SCREW	.56960	JOB	
2	PWMU-1-8011	REMOVE AND INSTALL SCREEN	.29280	JOB	
3	PWG-40-XV	CLEAN FAN	.19644	JOB	
4	PWG-34-II	CLEAN, LUBRICATE, INSPECT AND ADJUST MOTOR	.19240	JOB	
5	PWMU-1-8000	REMOVE AND INSTALL GEAR BOX PLUG	.07120	JOB	
6	PWG-40-VI	ADD OIL TO GEAR BOX	.02856	JOB	
7	5607	ADJUST BELT TENSION	.40800	JOB	
8	PWG-40-I	LUBRICATE BEARINGS	.07260	JOB	
9	PWG-40-XI	SENSORY INSPECT BEARINGS	.25260	JOB	
10	5601	ADJUST FLOAT ASSEMBLY	.08000	JOB	
11	PWG-40-XIII	FILL OUT INSPECTOR REPORT	.05500	JOB	

VT-48 = 2.21919 HRS PER JOB

VT-49 CLEAN, INSPECT, ADJUST AND LUBRICATE AIR HANDLING UNIT (3-24 TON).
--INCLUDES REMOVE AND INSTALL PANELS; CLEAN CENTRIFUGAL (SQUIRREL CAGE) FAN, COOLING COILS AND AIR PLENUM; INSPECT; MAKE ADJUSTMENTS; LUBRICATE BEARINGS.

NO	REFERENCE	WORK UNIT DESCRIPTION	HOURS	UNITS	V38
1	PWMU-1-8000	REMOVE AND INSTALL SCREW	.28480	JOB	
2	PWMU-1-8012	REMOVE AND INSTALL PANEL	.03560	JOB	
3	PWG-40-XI	SENSORY INSPECTION SQUIRREL CAGE FAN AND MOTOR	.08420	JOB	
4	PWG-40-XXIV	CLEAN SQUIRREL CAGE FAN	.38763	JOB	
5	PWMU-1-8031	CLEAN COOLING COILS	.27400	JOB	
6	PWV-2-I	CLEAN AIR PLENUM	.18680 .02400	JOB JOB	
7	PWG-40-I	GREASE FAN BEARINGS	.02420	JOB	
8	5604	ADJUST FAN MOTOR PULLEYS	.07100	JOB	

VT-49 * 1.37223 HRS PER JOB

VT-50 CLEAN, INSPECT, ADJUST, LUBRICATE AND CHANGE OIL IN COMPRESSOR IN OPEN (CENTRAL COMPRESSION) AIR CONDITIONING SYSTEM (3-24 TON)--INCLUDES WIPE COMPRESSOR AND MOTOR; INSPECT FOR LEAKS AND PROPER OPERATION; ADJUST BELTS; LUBRICATE MOTOR BEARING; DRAIN AND FILL CRANKCASE; AND CHARGE SYSTEM.

NO	REFERENCE	WORK UNIT DESCRIPTION	HOURS	UNITS	V36
1	PWMU-1-8028	WIPE COMPRESSOR AND MOTOR	.16980	JOB	
2	PWMU-1-8010	REMOVE AND INSTALL BELT	.02620	JOB	
3	5607	ADJUST BELT TENSION AND ALIGNMENT	.10200	JOB	
4	PWN-3-VII	DRAIN OIL FROM CRANKCASE	.07887 .01443	JOB JOB	
5	PWN-3-VII	FILL CRANKCASE WITH OIL	.07887 .01443	JOB JOB	
6	VT-2	PREPARE AND RUN TO PUMP DOWN	.38220	JOB	
7	PWMU-1-8032	INSPECT SIGHT GLASS	.00790	JOB	
8	VT-1	CHARGE OPEN (CENTRAL COMPRESSION) AIR CONDITIONING SYSTEM	.62145 .03769	JOB JOB	
9	4210	INSPECT FOR LEAKS	.07500	JOB	
10	PWG-40-I	LUBRICATE MOTOR BEARINGS	.01210	JOB	
11	4211	CHECK FOR PROPER OPERATION	.29200	JOB	

VT-50 * 1.91224 HRS PER JOB

VT-51 CLEAN, INSPECT, ADJUST AND LUBRICATE AIR HANDLING UNIT (3-24 TON).
--INCLUDES REMOVE AND INSTALL PANELS; CLEAN CENTRIFUGAL (SQUIRREL CAGE) FAN, COOLING AND HEATING COILS AND AIR PLENUM; INSPECT FAN AND MOTOR; ADJUST PULLEYS; LUBRICATE FAN BEARINGS.

NO	REFERENCE	WORK UNIT DESCRIPTION	HOURS	UNITS	V38
1	PWMU-1-8000	REMOVE AND INSTALL SCREW	.28480	JOB	
2	PWMU-1-8012	REMOVE AND INSTALL PANEL	.03560	JOB	
3	PWG-40-XI	SENSORY INSPECTION SQUIRREL CAGE AND FAN AND MOTOR	.08420	JOB	
4	PWG-40-XXIV	CLEAN SQUIRREL CAGE FAN	.38763	JOB	
5	PWMU-1-8031	CLEAN COOLING AND HEATING COILS	.54800	JOB	
6	PWV-2-I	CLEAN AIR PLENUM (CLEAN AVG. OF 40 SQ. FT.)	.18680 .02400	JOB JOB	
7	PWG-40-I	GREASE FAN BEARINGS	.02420	JOB	
8	5607	ADJUST FAN MOTOR PULLEYS	.10200	JOB	

VT-51 = 1.67722 HRS PER JOB

VT-52 CLEAN, INSPECT, ADJUST AND LUBRICATE AIR HANDLING UNIT (25-99 TON).
--INCLUDES REMOVE AND INSTALL PANELS; CLEAN CENTRIFUGAL (SQUIRREL CAGE) FAN, COOLING COILS AND PLENUM; INSPECT FAN AND MOTOR; ADJUST PULLEY; LUBRICATE FAN BEARINGS.

NO	REFERENCE	WORK UNIT DESCRIPTION	HOURS	UNITS	V38
1	PWMU-1-8000	REMOVE AND INSTALL SCREW	.42720	JOB	
2	PWMU-1-8013	REMOVE AND INSTALL PANEL	.13860	JOB	
3	PWG-40-XI	SENSORY INSPECT SQUIRREL CAGE FAN AND MOTOR	.08420	JOB	
4	PWG-40-XXIV	CLEAN SQUIRREL CAGE FAN	.77526	JOB	
5	PWMU-1-8031	CLEAN COOLING COILS	1.23300	JOB	
6	PWV-2-I	CLEAN AIR PLENUM (AVG. OF 180 SQ. FT.)	.18680 .10800	JOB JOB	
7	PWG-40-I	GREASE FAN BEARINGS	.03025	JOB	
8	5607	ADJUST FAN MOTOR PULLEY	.10200	JOB	

VT-52 = 3.08531 HRS PER JOB

VT-53 CLEAN, INSPECT, ADJUST, LUBRICATE AND CHANGE OIL IN COMPRESSOR IN OPEN (CENTRAL COMPRESSION) AIR CONDITIONING SYSTEM (OVER 100 TON)--INCLUDES WIPE COMPRESSOR AND MOTOR; INSPECT FOR LEAKS AND SAFETY DEVICES; ADJUST MOTOR ALIGNMENT; LUBRICATE MOTOR BEARINGS; DRAIN AND FILL CRANKCASE, CHARGE SYSTEM; AND REMOVE AND INSTALL DRYER.

NO	REFERENCE	WORK UNIT DESCRIPTION	HOURS	UNITS	V38
1	PWMU-1-8028	WIPE COMPRESSOR AND MOTOR	.16880	JOB	
2	3608	CHECK AND ADJUST MOTOR ALIGNMENT COUPLINGS	.18800	JOB	
3	PWG-40-I	LUBRICATE MOTOR AND COUPLING	.02420	JOB	
4	PWN-3-VII	DRAIN OIL FROM CRANKCASE	.07887 .02896	JOB JOB	
5	PWN-3-V	FILL CRANKCASE WITH OIL	.02265 .05462	JOB JOB	
6	VT-2	PREPARE AND RUN TO PUMP DOWN	.38220	JOB	
7	PWMU-1-8032	INSPECT SIGHT GLASS	.01580	JOB	
8	VT-1	CHARGE OPEN (CENTRAL COMPRESSION) AIR CONDITIONING SYSTEM REPAIR	.62145 1.89450	JOB JOB	
9	4210	CHECK FOR LEAKS	.15000	JOB	
10	4207	CHECK SAFETY DEVICES	.12600	JOB	
11	PWQ-20-II	DRAIN WATER FROM AIR TANK	.01520	JOB	
12	PWG-40-I	LUBRICATE AIR COMPRESSOR	.01210	JOB	
13	VT-15	REMOVE AND INSTALL DRYER	1.63999	JOB	

VT-53 = 5.42334 MHS PER JOB

VT-54 CLEAN, INSPECT, ADJUST AND LUBRICATE WOOD COOLING TOWER (25-99 TON).
--INCLUDES REMOVE AND INSTALL PANELS; CLEAN INSIDE TOWER AND COMPONENTS WITH WATER HOSE, BRUSH AND/OR CLOTH; INSPECT FAN AND MOTOR; ADJUST MOTOR AND FLOAT; LUBRICATE FAN, MOTOR AND WATER PUMP.

NO **	REFERENCE	WORK UNIT DESCRIPTION	HOURS	UNITS	V38
1	PWMU-1-8000	REMOVE AND INSTALL SCREW	.14240	J08	
2	PWMU-1-8011	REMOVE AND INSTALL PANEL	.14640	J08	
3	PWMU-1-8012	REMOVE AND INSTALL SLAT	.28480	J08	
4	PWMU-1-8006	TIGHTEN FLANGE NUT	.05360	J03	
5	PWV-2-I	CLEAN INSIDE TOWER WITH WATER HOSE	.18680 .13200	J08 J08	
6	PWV-2-II	CLEAN INSIDE TOWER BY SCRAPING, BRUSHING AND WIPING	.02184 .67848	J08 J08	
7	PWG-40-XV	CLEAN FAN	.04911	J08	
8	PWG-40-I	LUBRICATE FAN	.01210	J08	
9	PWG-36-II	CLEAN, LUBRICATE AND ADJUST MOTOR	.04810	J08	
10	PWMU-1-8011	REMOVE AND INSTALL BELT	.07320	J08	
11	PWMU-1-8028	CLEAN WATER PUMP	.08440	J08	
12	PWG-40-I	LUBRICATE WATER PUMP	.01210	J08	
13	PWMU-1-8013	REMOVE AND INSTALL FLOAT	.04620	J08	
14	PWMU-1-8026	CLEAN FLOAT	.01640	J08	
15	5601	ADJUST FLOAT	.04000	J08	
16	PWV-2-IV	PREPARE TO DRAIN OR FILL TOWER	.08732	J08	

VT-54 = 2.11524 HRS PER J08

VT-55 CLEAN, INSPECT, ADJUST AND LUBRICATE AIR HANDLING UNIT (25-99 TON).
--INCLUDES REMOVE AND INSTALL PANELS; CLEAN CENTRIFUGAL (SQUIRREL CAGE) FAN, COOLING AND HEATING COILS AND AIR PLENUM; INSPECT FAN AND MOTOR; ADJUST FAN MOTOR PULLEYS AND LUBRICATE FAN BEARINGS.

NO **	REFERENCE	WORK UNIT DESCRIPTION	HOURS	UNITS	V38
1	PWMU-1-8000	REMOVE AND INSTALL SCREW	.42720	J08	
2	PWMU-1-8013	REMOVE AND INSTALL PANEL	.13860	J08	
3	PWG-40-XI	SENSORY INSPECT SQUIRREL CAGE FAN AND MOTOR	.08420	J08	
4	PWG-40-XXIV	CLEAN SQUIRREL CAGE FAN	.77526	J08	
5	PWMU-1-8031	CLEAN COOLING AND HEATING COILS	2.46600	J08	
6	PWV-2-I	CLEAN AIR PLENUM (AVG. 180 SQ. FT.)	.18680 .10800	J08 J08	
7	PWG-40-I	GREASE FAN BEARINGS	.03025	J08	
8	5607	ADJUST FAN MOTOR PULLEYS	.10200	J08	

VT-55 = 4.31831 HRS PER J08

VT-56 CLEAN, INSPECT, ADJUST AND LUBRICATE EVAPORATIVE CONDENSER OR METAL COOLING TOWER (3-9 TON).
--INCLUDES REMOVE AND INSTALL PANELS; DRAIN AND FILL CONDENSER; CLEAN INSIDE CABINET AND COMPONENT WITH WATER HOSE, BRUSH AND/OR CLOTH; INSPECT MOTOR; ADJUST MOTOR AND FLOAT; LUBRICATE FAN AND MOTOR BEARINGS.

NO	REFERENCE	WORK UNIT DESCRIPTION	HOURS	UNITS	V38
1	PWMU-1-8000	REMOVE AND INSTALL SCREW	.21360	J08	
2	PWMU-1-8011	REMOVE AND INSTALL PANEL	.14640	J08	
3	PWV-2-I	CLEAN INSIDE CABINET WITH HOSE (AVG. 48 SQ. FT.)	.18680 .02880	J08 J08	
4	PWV-2-II	CLEAN INSIDE CABINET BY SCRAPING, BRUSHING AND WIPING. (AVG. 20 SQ. FT.)	.02184 .20560	J08 J08	
5	PWG-40-XV	CLEAN BLOWER FAN	.04911	J08	
6	PWG-40-I	LUBRICATE FAN	.01210	J08	
7	PWG-34-II	CLEAN, LUBRICATE, INSPECT AND ADJUST MOTOR	.04810	J08	
8	PWMU-1-8011	REMOVE AND INSTALL BELT	.03660	J08	
9	PWMU-1-8028	CLEAN WATER PUMP	.08440	J08	
10	PWG-40-I	LUBRICATE WATER PUMP	.01210	J08	
11	PWMU-1-8013	REMOVE AND INSTALL SPRAY NOZZLE	.46200	J08	
12	PWMU-1-8026	CLEAN SPRAY NOZZLE	.16400	J08	
13	PWMU-1-8013	REMOVE AND INSTALL FLOAT	.04620	J08	
14	PWMU-1-8026	CLEAN FLOAT	.01640	J08	
15	5601	ADJUST FLOAT	.04000	J08	
16	PWQ-20-II	DRAIN AND FILL CONDENSER	.22800	J08	

VT-56 = .00204 HRS PER J08

VT-57 CLEAN, INSPECT, ADJUST AND LUBRICATE AIR HANDLING UNIT (100-250 TON).
--INCLUDES REMOVE AND INSTALL PANELS; CLEAN CENTRIFUGAL (SQUIRREL CAGE) FAN AND MOTOR, COOLING COILS AND AIR PLENUM; INSPECT FAN AND MOTOR; ADJUST FAN MOTOR PULLEY; LUBRICATE FAN BEARINGS.

NO	REFERENCE	WORK UNIT DESCRIPTION	HOURS	UNITS	V38
1	PWMU-1-8000	REMOVE AND INSTALL SCREW	.56960	J08	
2	PWMU-1-8013	REMOVE AND INSTALL PANEL	.18480	J08	
3	PWG-40-XI	SENSORY INSPECT SQUIRREL CAGE FAN AND MOTOR	.08420	J08	
4	PWG-40-XXV	CLEAN SQUIRREL CAGE FAN	1.83756	J08	
5	PWMU-1-8031	CLEAN COOLING COILS	3.56200	J08	
6	PWV-2-I	CLEAN AIR PLENUM (AVG. OF 520 SQ. FT.)	.18680 .31200	J08 J08	
7	PWG-40-I	GREASE FAN BEARINGS	.03025	J08	
8	5607	ADJUST FAN MOTOR PULLEY	.10200	J08	

VT-57 = 6.86921 HRS PER J08

VT-58 CLEAN, INSPECT, ADJUST AND LUBRICATE AIR HANDLING UNIT (100-250 TON).
--INCLUDES REMOVE AND INSTALL PANELS; CLEAN CENTRIFUGAL (SQUIRREL CAGE) FAN, COOLING AND HEATING COILS AND AIR PLENUM; INSPECT FAN AND MOTOR; ADJUST FAN MOTOR PULLEY; LUBRICATE FAN BEARINGS.

NO	REFERENCE	WORK UNIT DESCRIPTION	HOURS	UNITS	V38
1	PWMU-1-8000	REMOVE AND INSTALL SCREWS	.56960	JOB	
2	PWMU-1-8013	REMOVE AND INSTALL PANEL	.18480	JOB	
3	PWG-40-XI	SENSORY INSPECT SQUIRREL CAGE FAN AND MOTOR	.08420	JOB	
4	PWG-40-XXV	CLEAN SQUIRREL CAGE FAN	1.83756	JOB	
5	PWMU-1-8031	CLEAN COOLING AND HEATING COILS	7.12400	JOB	
6	PWV-2-I	CLEAN AIR PLENUM (AVG. OF 520 SQ. FT.)	.18680 .31200	JOB JOB	
7	PWG-40-I	GREASE FAN BEARINGS	.03025	JOB	
8	5607	ADJUST FAN MOTOR PULLEY	.10200	JOB	

VT-58 = 10.43121 HRS PER JOB

VT-59 CLEAN, INSPECT, ADJUST AND LUBRICATE WOOD COOLING TOWER (800-999 TON).
--INCLUDES REMOVE AND INSTALL PANELS; CLEAN INSIDE OF TOWER, FAN, MOTOR, WATER PUMP AND FLOAT WITH WATER HOSE, BRUSH AND/OR CLOTH; INSPECT; ADJUST MOTOR AND FLOAT; LUBRICATE FAN, MOTOR, WATER PUMP; ADD OIL TO GEAR BOX.

NO	REFERENCE	WORK UNIT DESCRIPTION	HOURS	UNITS	V38
1	PWMU-1-8000	REMOVE AND INSTALL SCREW	.14240	JOB	
2	PWMU-1-8011	REMOVE AND INSTALL PANEL	.14640	JOB	
3	PWMU-1-8012	REMOVE AND INSTALL SLAT	.28480	JOB	
4	PWMU-1-8006	TIGHTEN FLANGE NUT	.05360	JOB	
5	PWV-2-I	CLEAN INSIDE OF TOWER WITH WATER HOSE	.18680 1.00800	JOB JOB	
6	PWV-2-II	CLEAN INSIDE OF TOWER BY SCRAPING, BRUSHING AND WIPING	.02184 7.71000	JOB JOB	
7	PWG-40-XV	CLEAN FAN	.14733	JOB	
8	PWG-40-I	LUBRICATE FAN	.01815	JOB	
9	PWG-34-II	CLEAN, LUBRICATE, AND ADJUST MOTOR	.14430	JOB	
10	PWMU-1-8011	REMOVE AND INSTALL BELT	.07320	JOB	
11	PWMU-1-8028	CLEAN WATER PUMP	.08440	JOB	
12	PWG-40-I	LUBRICATE WATER PUMP	.01210	JOB	
13	PWMU-1-8013	REMOVE AND INSTALL FLOAT	.04620	JOB	
14	PWMU-1-8026	CLEAN FLOAT	.01640	JOB	
15	5601	ADJUST FLOAT	.04000	JOB	
16	PWV-2-IV	PREPARE TO DRAIN OR FILL TOWER	.17464	JOB	
17	PWMU-1-8000	REMOVE AND INSTALL GEAR BOX PLUG	.05340	JOB	
18	PWG-40-VI	ADD OIL TO GEAR BOX	.02142	JOB	

VT-59 = 10.38538 HRS PER JOB

VT-60 RECURRING MAINTENANCE--INSPECT, ADJUST AND LUBRICATE AIR HANDLING UNIT (25-250 TON SYSTEM)-- INCLUDES REMOVE AND INSTALL PANEL; INSPECT FAN AND MOTOR; ADJUST BELT TENSION; LUBRICATE BEARINGS; REPLACE FILTER; AND FILL OUT INSPECTION REPORT.

NO	REFERENCE	WORK UNIT DESCRIPTION	HOURS	UNITS	V38
1	PWMU-1-8000	REMOVE AND INSTALL SCREW	.56960	JOB	
2	PWMU-1-8012	REMOVE AND INSTALL PANEL	.07120	JOB	
3	PWG-40-XI	SENSORY INSPECT FAN AND MOTOR	.08420	JOB	
4	PWG-40-I	GREASE BEARINGS	.03025	JOB	
5	5607	ADJUST BELT TENSION	.10200	JOB	
6	PWMU-1-8010	REMOVE AND INSTALL DISPOSABLE FILTER	.15720	JOB	
7	PWG-40-XIII	FILL OUT INSPECTION REPORT	.01375	JOB	

VT-60 = 1.02820 HRS PER JOB

VT-61 CLEAN, LUBRICATE, ADJUST AND INSPECT EVAPORATIVE CONDENSER OR METAL COOLING TOWER (25-49 TON SYS.) -INCLUDES DRAINING AND FILLING.-- DOES NOT INCLUDE ACID CLEANING.

NO	REFERENCE	WORK UNIT DESCRIPTION	HOURS	UNITS	V38
1	PWMU-1-8000	REMOVE AND INSTALL SCREW	.21360	JOB	
2	PWMU-1-8011	REMOVE AND INSTALL PANEL	.21960	JOB	
3	PWV-2-I	CLEAN INSIDE CABINET WITH WATER HOSE	.18680 .04080	JOB JOB	
4	PWV-2-II	CLEAN INSIDE OF CABINET BY SCRAPING, BRUSHING AND WIPING	.02184 .26728	JOB JOB	
5	PWG-40-XXIV	CLEAN BLOWER FAN	.77526	JOB	
6	PWG-40-I	LUBRICATE BLOWER FAN	.02420	JOB	
7	PWG-34-II	CLEAN, LUBRICATE, INSPECT AND ADJUST MOTOR	.09620	JOB	
8	PWMU-1-8011	REMOVE AND INSTALL BELT	.07320	JOB	
9	PWMU-1-8029	CLEAN WATER PUMP	.08440	JOB	
10	PWG-40-I	LUBRICATE WATER PUMP	.01210	JOB	
11	PWMU-1-8013	REMOVE AND INSTALL NOZZLES	1.38600	JOB	
12	PWMU-1-8026	CLEAN NOZZLES	.49200	JOB	
13	PWMU-1-8013	REMOVE AND INSTALL FLOAT	.04620	JOB	
14	PWMU-1-8026	CLEAN FLOAT	.01640	JOB	
15	5601	ADJUST FLOAT	.04000	JOB	
16	PWMU-1-8011	REMOVE AND INSTALL BAFFLE	.21960	JOB	
17	PWG-20-II	DRAIN AND FILL CONDENSER	.68400	JOB	

VT-61 = 4.89947 HRS PER JOB

VT-62 CLEAN, LUBRICATE, ADJUST AND INSPECT AIR-COOLED CONDENSER (3-24 TON AIR CONDITIONING SYSTEM)

NO **	REFERENCE **********	WORK UNIT DESCRIPTION **********	HOURS **********	UNITS **********	V38
1	PWMU-1-8000	REMOVE AND INSTALL SCREW	.17800	JOB	
2	PWMU-1-8011	REMOVE AND INSTALL PANEL	.14640	JOB	
3	PWV-2-I	CLEAN INSIDE CABINET WITH WATER HOSE	.18680 .01800	JOB JOB	
4	PWV-2-II	CLEAN INSIDE OF CABINET BY SCRAPING, BRUSHING AND WIPING	.02184 .20560	JOB JOB	
5	PWG-40-XV	CLEAN FAN	.04911	JOB	
6	PWG-40-I	LUBRICATE FAN	.01210	JOB	
7	PWG-34-II	CLEAN, LUBRICATE AND ADJUST MOTOR	.04810	JOB	
8	PWMU-1-8011	REMOVE AND INSTALL BELT	.07320	JOB	

VT-62 = .93915 HRS PER JOB

VT-63 CLEAN, LUBRICATE, ADJUST AND INSPECT EVAPORATIVE CONDENSER OR METAL COOLING TOWER (100-199 SYSTEM) -INCLUDES DRAINING AND FILLING.-- DOES NOT INCLUDE ACID CLEAN.

NO **	REFERENCE **********	WORK UNIT DESCRIPTION **********	HOURS **********	UNITS **********	V38
1	PWMU-1-8000	REMOVE AND INSTALL SCREW	.32040	JOB	
2	PWMU-1-8011	REMOVE AND INSTALL PANEL	.29280	JOB	
3	PWV-2-I	CLEAN INSIDE CABINET WITH WATER HOSE	.18680 .12000	JOB JOB	
4	PWV-2-II	CLEAN INSIDE CABINET BY SCRAPING, BRUSHING AND WIPING	.02184 .63736	JOB JOB	
5	PWG-40-XXIV	CLEAN BLOWER FAN	1.93815	JOB	
6	PWG-40-I	LUBRICATE FAN	.06050	JOB	
7	PWG-34-II	CLEAN, LUBRICATE AND ADJUST MOTOR	.04810	JOB	
8	PWMU-1-8011	REMOVE AND INSTALL BELT	.14640	JOB	
9	PWMU-1-8028	CLEAN WATER PUMP	.08440	JOB	
10	PWG-40-I	LUBRICATE WATER PUMP	.01210	JOB	
11	PWMU-1-8013	REMOVE AND INSTALL NOZZLE	2.31000	JOB	
12	PWMU-1-8026	CLEAN NOZZLE	.82000	JOB	
13	PWMU-1-8013	REMOVE AND INSTALL FLOAT	.04620	JOB	
14	PWMU-1-8026	CLEAN FLOAT	.01640	JOB	
15	5601	ADJUST FLOAT	.04000	JOB	
16	PWMU-1-8011	REMOVE AND INSTALL BAFFLE	.36600	JOB	
17	PWQ-20-II	FILL AND DRAIN CONDENSER	1.52000	JOB	

VT-63 = 8.98744 HRS PER JOB

VT-64 CLEAN, LUBRICATE, ADJUST AND INSPECT AIR-COOLED CONDENSER (25-49 TON AIR CONDITIONING SYSTEM)

NO	REFERENCE	WORK UNIT DESCRIPTION	HOURS	UNITS	V38
1	PWMU-1-8000	REMOVE AND INSTALL SCREW	.24920	JOB	
2	PWMU-1-8011	REMOVE AND INSTALL PANEL	.14640	JOB	
3	PWV-2-I	CLEAN INSIDE OF CABINET WITH WATER	.18680 .06000	JOB JOB	
4	PWV-2-II	CLEAN INSIDE CABINET BY SCRAPING, BRUSHING AND WIPING	.02184 1.02800	JOB JOB	
5	PWG-40-XV	CLEAN FAN	.04911	JOB	
6	PWG-40-I	LUBRICATE FAN	.01210	JOB	
7	PWG-34-II	CLEAN, LUBRICATE AND ADJUST MOTOR	.04810	JOB	
8	PWMU-1-8011	REMOVE AND INSTALL BELT	.07320	JOB	
9	PWA-5-II	MATERIAL HANDLING	.41436	JOB	

VT-64 = 2.28911 HRS PER JOB

VT-65 REMOVE AND INSTALL 100-DISPOSABLE TYPE FILTERS FROM OVERHEAD PLENUMS.--AVG. 10-PLENUMS PER 100 FILTERS. LADDER USE INCLUDED.

NO	REFERENCE	WORK UNIT DESCRIPTION	HOURS	UNITS	V38
1	PWMU-1-8000	REMOVE AND INSTALL WING NUT OR SCREW	1.06800	JOB	
2	PWMU-1-8022	REMOVE AND INSTALL PANEL	2.05600	JOB	
3	PWMU-1-8010	REMOVE AND INSTALL 100 DISPOSABLE FILTERS AVG. 10 PLENUMS PER 100 FILTERS	2.62000	JOB	
4	PWA-5-II	MATERIAL HANDLING	.20718	JOB	
5	PWMU-1-8052	GET, ASCEND, DESCEND, AND ASIDE LADDER	.20700	JOB	

VT-65 = 6.15818 HRS PER JOB

VT-66 PUNCH TUBES IN SHELL AND TUBE WATER-COOLED CONDENSER OR CHILLED WATER EVAPORATOR (700-800 TON SYS.) --INCLUDES DRAIN AND FILL, REMOVE AND INSTALL END PLATES, AND FABRICATE AND INSTALL GASKETS. USE LADDER OR SCAFFOLDING.

NO	REFERENCE	WORK UNIT DESCRIPTION	HOURS	UNITS	V38
1	PWQ-19-VIII	REMOVE AND INSTALL PIPE FITTING	.54868	JOB	
2	PWQ-20-II	DRAIN AND FILL TUBES	1.52000	JOB	
3	PWMU-1-8552	REMOVE AND INSTALL LARGE NUT	1.52600	JOB	
4	PWN-10-XIII	REMOVE AND INSTALL END PLATES	1.13560	JOB	
5	PWV-13-II	PUNCH CLEAN TUBE UP TO 12 FEET LONG	.02408 4.42200	JOB JOB	
6	PWV-13-II	DRY TUBE WITH RAG	.02408 4.42200	JOB JOB	
7	PWN-19-II	CUT 2 GASKETS	.01564 .18508	JOB JOB	
8	PWN-19-K5	PUNCH 32 HOLES IN GASKET	.00201 .23648	JOB JOB	
9	PWMU-1-8022	INSTALL GASKET	.20560	JOB	
10	PWA-5-II	MATERIAL HANDLING	.41436	JOB	
11	PWMU-1-8052	GET, ASCEND, DESCEND, AND ASIDE LADDER	.04140	JOB	

VT-66 = 14.72301 HRS PER JOB

VT-67 REMOVE AND INSTALL VALVE PLATES ON COMPRESSOR IN OPEN (CENTRAL COMPRESSION) AIR CONDITIONING SYSTEM

NO	REFERENCE	WORK UNIT DESCRIPTION	HOURS	UNITS	V38
1	VT-2	RUN COMPRESSOR TO PUMPDOWN	.38220	JOB	
2	PWMU-1-8552	REMOVE AND INSTALL COMPRESSOR HEAD BOLTS	.52320	JOB	
3	5519	REMOVE HEAD PLATE COVER	.05622	JOB	
4	PWMU-1-8000	REMOVE AND INSTALL VALVE PLATE BOLTS	.28480	JOB	
5	5519	REMOVE VALVE PLATE	.05622	JOB	
6	0528	REMOVE AND INSTALL GASKET ON VALVE PLATE OR HEAD COVER	.05200	JOB	
7	2983	INSTALL VALVE PLATE OR HEAD COVER	.00832	JOB	
8	PWV-1-XVIII	PULL VACUUM ON SYSTEM	1.32348	JOB	
9	VT-1	CHARGE OPEN (CENTRAL COMPRESSION) AIR CONDITIONING SYSTEM	.62145 .37890	JOB JOB	
10	PWV-1-II	PUT SYSTEM INTO OPERATION	.95211	JOB	

VT-67 = 4.63889 HRS PER JOB

VT-68 REMOVE AND INSTALL DOOR GASKET ON DOMESTIC REFRIGERATOR.

NO	REFERENCE	WORK UNIT DESCRIPTION	HOURS	UNITS	V38
1	PWMU-1-8000	REMOVE AND INSTALL SCREWS	.78320	JOB	
2	PWMU-1-8021	REMOVE AND INSTALL DOOR PANEL	.04900	JOB	
3	PWMU-1-8011	REMOVE AND INSTALL GASKET	.07320	JOB	
4	5601	ADJUST PANEL AND GASKET TO HOLES	.16000	JOB	
5	5604	ALIGN AND ADJUST DOOR	.07100	JOB	
6	4208	CHECK DOOR FOR FIT	.04200	JOB	
7	PWMU-1-8027	CLEAN DOOR	.03590	JOB	

VT-68 * 1.21430 HRS PER JOB

VT-69 REMOVE AND INSTALL BELT ON WATER COOLER.--INCLUDES REMOVE AND INSTALL ACCESS PANEL.

NO	REFERENCE	WORK UNIT DESCRIPTION	HOURS	UNITS	V38
1	PWMU-1-8000	REMOVE AND INSTALL SCREW	.03560	JOB	
2	PWMU-1-8010	REMOVE AND INSTALL PANEL	.02620	JOB	
3	PWMU-1-8006	LOOSEN AND TIGHTEN BASE BOLTS	.05360	JOB	
4	PWMU-1-8010	REMOVE AND INSTALL BELT	.05240	JOB	
5	5600	ADJUST TENSION ON BELT	.05200	JOB	
6	PWMU-1-8005	PLUG AND UNPLUG UNIT	.00400	JOB	
7	4206	CHECK OPERATION	.00800	JOB	

VT-69 * .23180 HRS PER JOB

VT-70 SECURE SYSTEM; DRAIN AND FILL CRANKCASE; DISASSEMBLE AND ASSEMBLE; CLEAN; INSPECT; AND EVACUATE COMPRESSOR (10-25 TON AIR CONDITIONING SYSTEM) --DOES NOT INCLUDE PUMP DOWN, REMOVAL AND/OR INSTALLATION OF COMPRESSOR.

NO	REFERENCE	WORK UNIT DESCRIPTION	HOURS	UNITS	V38
1	PWJ-14-IV	OPEN AND CLOSE VALVES	.03384	J08	
2	PWMU-1-8552	REMOVE AND INSTALL VALVE BOLTS	.17440	J09	
3	PWMU-1-8021	REMOVE AND INSTALL SERVICE VALVE AND GASKETS	.19600	J09	
4	PWMU-1-8552	REMOVE AND INSTALL DRAIN PLUG	.02180	J08	
5	PWN-3-VII	DRAIN AND FILL CRANK CASE	.07887 .02896	J03 J09	
6	PWMU-1-8552	REMOVE AND INSTALL HEAD BOLTS	.43600	J03	
7	PWMU-1-9011	REMOVE AND INSTALL PLATE AND GASKET	.14640	J08	
8	PWMU-1-8000	REMOVE AND INSTALL VALVE PLATE SCREW	.03560	J05	
9	PWMU-1-8021	REMOVE AND INSTALL VALVE PLATE AND GASKET	.09600	J03	
10	PWMU-1-8552	REMOVE AND INSTALL BASE PLATE BOLTS	.26160	J09	
11	PWMU-1-9011	REMOVE AND INSTALL BASE PLATE AND GASKET	.14640	J08	
12	PWMU-1-8552	REMOVE AND INSTALL SEAL PLATE BOLTS	.13080	J09	
13	PWMU-1-8011	REMOVE AND INSTALL FLYWHEEL SHAFT KEY	.07320	J08	
14	PWMU-1-8021	REMOVE AND INSTALL SEAL PLATE, BELLOWS AND GASKET	.14700	J09	
15	PWMU-1-8013	REMOVE AND INSTALL SHAFT COLLAR	.04620	J09	
16	PWMU-1-8552	REMOVE AND INSTALL THRUST NUT	.02180	J08	
17	PWMU-1-8013	REMOVE AND INSTALL THRUST BEARING AND WASHERS	.09240	J08	
18	PWMU-1-8552	REMOVE AND INSTALL CONNECTING ROD BOLTS	.08720	J08	
19	PWMU-1-8010	REMOVE AND INSTALL BEARING CAP AND SHIMS	.10480	J08	
20	PWMU-1-8552	REMOVE AND INSTALL SEAL BEARING BOLTS	.17440	J08	
21	PWMU-1-8010	REMOVE AND INSTALL SEAL BEARING, PLATE AND GASKET	.07860	J08	
22	PWMU-1-8021	REMOVE AND INSTALL CRANKSHAFT	.04900	J08	
23	PWMU-1-8021	REMOVE AND INSTALL PISTON AND ROD ASSEMBLY	.09800	J08	
24	PWMU-1-8021	REMOVE AND INSTALL PISTON RINGS	.29400	J09	
25	PWMU-1-8021	REMOVE AND INSTALL WRIST PIN	.09800	J08	
26	PWMU-1-8027	CLEAN PARTS	.71800	J08	
27	4201	INSPECT PARTS	.33600	J08	
28	VT-2	CONNECT, OPERATE AND DISCONNECT VACUUM PUMP	.76440	J08	
29	PWA-5-II	MATERIAL HANDLING	.20718	J09	

VT-70 = 5.17884 MRS PER J08

VT-71 SECURE SYSTEM; DRAIN AND FILL CRANKCASE; DISASSEMBLE AND ASSEMBLE; CLEAN; INSPECT; AND EVACUATE COMPRESSOR (50-100 TON AIR CONDITIONING SYSTEM) --DOES NOT INCLUDE PUMP DOWN, REMOVAL AND/OR INSTALLATION OF COMPRESSOR.

NO	REFERENCE	WORK UNIT DESCRIPTION	HOURS	UNITS	V38
1	PWQ-14-IV	OPEN AND CLOSE SERVICE VALVES	.03384	JOB	
2	PWMU-1-8552	REMOVE AND INSTALL SERVICE VALVE BOLTS	.17440	JOB	
3	PWMU-1-8021	REMOVE AND INSTALL VALVE AND GASKET	.19600	JOB	
4	PWMU-1-8552	REMOVE AND INSTALL DRAIN PLUG	.02180	JOB	
5	PWN-3-VII	DRAIN AND REFILL CRANKCASE	.07887 .02896	JOB JOB	
6	PWMU-1-8552	REMOVE AND INSTALL HEAD BOLTS	1.30800	JOB	
7	PWMU-1-8011	REMOVE AND INSTALL HEAD AND GASKET	.43920	JOB	
8	PWMU-1-8000	REMOVE AND INSTALL VALVE PLATE SCREW	.10680	JOB	
9	PWMU-1-8021	REMOVE AND INSTALL VALVE PLATE AND GASKET	.29400	JOB	
10	PWMU-1-8552	REMOVE AND INSTALL BASE PLATE BOLTS	.91560	JOB	
11	PWMU-1-8011	REMOVE AND INSTALL BASE PLATE AND GASKET	.14640	JOB	
12	PWMU-1-8552	REMOVE AND INSTALL SEAL PLATE BOLT	.17440	JOB	
13	PWMU-1-8011	REMOVE AND INSTALL FLYWHEEL SHAFT KEY	.07320	JOB	
14	PWMU-1-8021	REMOVE AND INSTALL SEAL PLATE, BELLOWS, AND GASKET	.14700	JOB	
15	PWMU-1-8013	REMOVE AND INSTALL SHAFT COLLAR	.04620	JOB	
16	PWMU-1-8552	REMOVE AND INSTALL THRUST NUT	.02180	JOB	
17	PWMU-1-8013	REMOVE AND INSTALL THRUST BEARING AND WASHER	.09240	JOB	
18	PWMU-1-8552	REMOVE AND INSTALL CONNECTING ROD BOLTS	.26160	JOB	
19	PWMU-1-8010	REMOVE AND INSTALL BEARING CAP AND SHIM	.31440	JOB	
20	PWMU-1-8552	REMOVE AND INSTALL SEAL BEARING BOLTS	.26160	JOB	
21	PWMU-1-8010	REMOVE AND INSTALL SEAL BEARING, PLATE AND GASKET	.07860	JOB	
22	PWMU-1-8021	REMOVE AND INSTALL CRANKSHAFT	.04900	JOB	
23	PWMU-1-8021	REMOVE AND INSTALL PISTON AND ROD ASSEMBLY	.29400	JOB	
24	PWMU-1-8013	REMOVE AND INSTALL PISTON RINGS	.83160	JOB	
25	PWMU-1-8013	REMOVE AND INSTALL WRIST PIN	.27720	JOB	
26	PWMU-1-8027	CLEAN PARTS	1.00520	JOB	
27	+201	INSPECT PARTS	.57600	JOB	
28	VT-2	CONNECT, OPERATE AND DISCONNECT VACUUM PUMP	.76440	JOB	
29	PWA-9-II	MATERIAL HANDLING	.31077	JOB	

VT-71 = 9.32323 MAN PER JOB

VT-72 REPLACE SEALS AND BEARINGS IN WATER PUMP WITH 3-HP MOTOR.
--INCLUDES SECURE SYSTEM; REMOVE AND INSTALL PUMP; DISASSEMBLE AND ASSEMBLE; ACTIVATE SYSTEM.

NO **	REFERENCE	WORK UNIT DESCRIPTION	HOURS	UNITS	V38
1	PWMU-1-8005	TURN POWER OFF AND ON	.00400	JOB	
2	PWQ-14-IV	CLOSE AND OPEN VALVES	.03384	JOB	
3	PWMU-1-8552	REMOVE AND INSTALL DRAIN PLUG	.02180	JOB	
4	PWMU-1-8012	SECURE WATER LINES IN POSITION	.03560	JOB	
5	PWMU-1-8552	REMOVE AND INSTALL STRAINER SECTION	.17440	JOB	
6	PWMU-1-8552	REMOVE AND INSTALL SHOCK ABSORBER	.17440	JOB	
7	PWMU-1-8000	REMOVE AND INSTALL BOLTS IN HOUSING	.17800	JOB	
8	PWMU-1-8011	REMOVE AND INSTALL HOUSING AND GASKET	.14640	JOB	
9	PWMU-1-8552	REMOVE AND INSTALL MOUNTING BOLTS	.08720	JOB	
10	PWMU-1-8006	LOOSEN AND TIGHTEN COUPLING SCREWS	.02680	JOB	
11	PWMU-1-8013	REMOVE AND INSTALL COUPLING	.04620	JOB	
12	PWMU-1-8552	REMOVE AND INSTALL IMPELLER NUT	.02180	JOB	
13	PWMU-1-8021	REMOVE AND INSTALL IMPELLER	.04900	JOB	
14	PWMU-1-8013	REMOVE AND INSTALL SEALS	.09240	JOB	
15	PWMU-1-8552	REMOVE AND INSTALL BEARING BOLTS	.13080	JOB	
16	PWMU-1-8011	REMOVE AND INSTALL SHAFT BEARINGS	.14640	JOB	
17	PWA-5-II	MATERIAL HANDLING	.20718	JOB	

VT-72 * 1.57622 HRS PER JOB

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3 REMOVE AND INSTALL CENTRIFUGAL (SQUIRREL CAGE) FAN AND MOTOR

NO **	REFERENCE	WORK UNIT DESCRIPTION	HOURS	UNITS	V38
1	PWV-3-I	REMOVE AND INSTALL CENTRIFUGAL (SQUIRREL CAGE) FAN	.23983	JOB	
2	PWV-3-II	REMOVE AND INSTALL DOUBLE CENTRIFUGAL (SQUIRREL CAGE) FANS	.42367	JOB	
3	PWV-3-III	REMOVE AND INSTALL CENTRIFUGAL FAN MOTOR	1.05927	JOB	
4	PWMU-1-8556	WALK AROUND WORK AREA AND EQUIPMENT PERFORMING DUTIES	.01700	JOB	
5	PWA-5-II	MATERIAL HANDLING	.10359	JOB	

VT-73 * 1.84336 HRS PER JOB

VT-74 REMOVE AND INSTALL AIR COOLING UNIT PROPELLER TYPE FAN AND MOTOR

NO	REFERENCE	WORK UNIT DESCRIPTION	HOURS	UNITS	V38
1	PMV-3-IV	REMOVE AND INSTALL FAN MOTOR	1.29409	JOB	
2	PMV-3-V	REMOVE AND INSTALL FAN	.51312	JOB	
3	PWMU-1-8556	WALK AROUND WORK AREA AND EQUIPMENT PERFORMING DUTIES	.01700	JOB	
4	PWA-5-II	MATERIAL HANDLING	.10359	JOB	

VT-74 = 1.92780 HRS PER JOB

VT-75 REMOVE AND INSTALL FAN AND MOTOR IN WATER TOWER

NO	REFERENCE	WORK UNIT DESCRIPTION	HOURS	UNITS	V38
1	PMV-3-VI	REMOVE AND INSTALL FAN MOTOR	2.34273	JOB	
2	PWMU-1-8556	WALK AROUND WORK AREA AND EQUIPMENT PERFORMING DUTIES	.08500	JOB	
3	PWA-5-II	MATERIAL HANDLING	.10359	JOB	

VT-75 = 2.53132 HRS PER JOB

VT-76 REMOVE WINDOW AIR CONDITIONER (UP TO 1/2 TON) FROM RAISABLE WINDOW

NO	REFERENCE	WORK UNIT DESCRIPTION	HOURS	UNITS	V38
1	2235	UNPLUG UNIT	.00099	JOB	
2	2648	TIE UP ELECTRICAL CORD	.00185	JOB	
3	PWMU-1-8005	RAISE AND LOWER WINDOW	.00400	JOB	
4	PWMU-1-8010	REMOVE WEATHERSTRIPPING	.01310	JOB	
5	PWMU-1-8010	REMOVE FILLER PANEL	.02620	JOB	
6	PWMU-1-8553	LOOSEN LEVELING SCREW	.01740	JOB	
7	PWMU-1-8021	REMOVE UNIT FROM WINDOW	.02450	JOB	
8	PWA-5-II	MATERIAL HANDLING	.20718	JOB	
9	PWMU-1-8052	GET, ASCEND, DESCEND, AND ASIDE LADDER	.02070	JOB	
10	PWG-40-XII	FILL OUT RECORD SHEET	.01185	JOB	

VT-76 = .32777 HRS PER JOB

VT-77 INSTALL WINDOW AIR CONDITIONER (UP TO 1/2 TON) IN RAISABLE WINDOW

NO	REFERENCE	WORK UNIT DESCRIPTION	HOURS	UNITS	V38
1	PWMU-1-8005	RAISE AND LOWER WINDOW	.00400	JOB	
2	PWMU-1-8021	REMOVE UNIT FROM CARTON	.02450	JOB	
3	PWMU-1-8021	POSITION UNIT IN WINDOW	.02450	JOB	
4	PWMU-1-8552	INSTALL LEVELING ARM	.08720	JOB	
5	PWMU-1-8553	ADJUST AND TIGHTEN LEVELING SCREW	.01740	JOB	
6	PWMU-1-8010	INSTALL FILLER PANEL	.02620	JOB	
7	PWMU-1-8010	INSTALL WEATHERSTRIPPING	.01310	JOB	
8	2234	PLUG IN UNIT	.00125	JOB	
9	4211	CHECK OPERATION	.29200	JOB	
10	PWA-5-II	MATERIAL HANDLING	.20718	JOB	

VT-77 = .69733 HRS PER JOB

VT-200 ASSIST BOILER INSPECTOR IN EXTERNAL INSPECTION OF FIRE TUBE BOILER, 3,348 TO 6,696 LB./HR. (100 TO 200 HP)

NO	REFERENCE	WORK UNIT DESCRIPTION	HOURS	UNITS	V38
1	PWV-14-I	EXTERNALLY INSPECT FIRE TUBE BOILER	.38283	JOB	

VT-200 = .38283 HRS PER JOB

VT-201 ASSIST BOILER INSPECTOR IN EXTERNAL INSPECTION OF WATER TUBE BOILER, 16,740 TO 33,480 LB./HR. (500 TO 1000 HP)

NO	REFERENCE	WORK UNIT DESCRIPTION	HOURS	UNITS	V38
1	PWV-14-II	EXTERNALLY INSPECT WATER TUBE BOILER	.46372	JOB	

VT-201 = .46372 HRS PER JOB

VT-202 ASSIST BOILER INSPECTOR IN INTERNAL INSPECTION OF FIRE TUBE BOILER, 3,348 TO 6,696 LB./HR. (100 TO 200 HP)

NO	REFERENCE	WORK UNIT DESCRIPTION	HOURS	UNITS	V38
1	PWV-14-III	INTERNALLY INSPECT FIRE TUBE BOILER	.67065	JOB	

VT-202 = .67065 HRS PER JOB

VT-203 ASSIST BOILER INSPECTOR IN INTERNAL INSPECTION OF WATER TUBE BOILER, 16,740 TO 33,480 LB./HR. (500 TO 1000 HP)

NO	REFERENCE	WORK UNIT DESCRIPTION	HOURS	UNITS	V38
1	PWV-14-IV	INTERNALLY INSPECT WATER TUBE BOILER	1.42617	JOB	

VT-203 * 1.42617 HRS PER JOB

VT-204 ASSIST BOILER INSPECTOR IN OPERATIONAL TEST OF FIRE TUBE BOILER, 3,348 TO 6,696 LB./HR. (100 TO 200 HP)

NO	REFERENCE	WORK UNIT DESCRIPTION	HOURS	UNITS	V38
1	PWV-14-VII	TEST OPERATION OF FIRE TUBE BOILER	.53314	JOB	

VT-204 * .53314 HRS PER JOB

VT-205 ASSIST BOILER INSPECTOR IN OPERATIONAL TEST OF WATER TUBE BOILER, 16,740 TO 33,480 LB./HR. (500 TO 1000 HP)

NO	REFERENCE	WORK UNIT DESCRIPTION	HOURS	UNITS	V38
1	PWV-14-VIII	TEST OPERATION OF WATER TUBE BOILER	.87561	JOB	

VT-205 * .97561 HRS PER JOB

VT-206 ASSIST BOILER INSPECTOR IN HYDROSTATIC INSPECTION OF FIRE TUBE BOILER, 3,348 TO 6,696 LB./HR. (100 TO 200 HP)

NO	REFERENCE	WORK UNIT DESCRIPTION	HOURS	UNITS	V38
1	PWV-14-V	HYDROSTATIC INSPECT FIRE TUBE BOILER	1.48028	JOB	

VT-206 * 1.48028 HRS PER JOB

VT-207 ASSIST BOILER INSPECTOR IN HYDROSTATIC INSPECTION OF WATER TUBE BOILER, 16,740 TO 33,480 LB./HR. (500 TO 1000 HP)

NO	REFERENCE	WORK UNIT DESCRIPTION	HOURS	UNITS	V38
1	PWV-14-VI	HYDROSTATIC INSPECT WATER TUBE BOILER	2.43572	JOB	

VT-207 * 2.43572 HRS PER JOB

VT-208 ASSIST BOILER INSPECTOR IN EXTERNAL AND INTERNAL INSPECTION OF FIRE TUBE BOILER, 3,348 TO 6,696 LB. /HR. (100 TO 200 HP)

NO	REFERENCE	WORK UNIT DESCRIPTION	HOURS	UNITS	V38
1	PWV-14-III	INTERNALLY INSPECT FIRE TUBE BOILER	.67065	JOB	
2	PWV-14-I	EXTERNALLY INSPECT FIRE TUBE BOILER	.38283	JOB	

VT-208 = 1.05348 HRS PER JOB

VT-209 ASSIST BOILER INSPECTOR IN EXTERNAL AND INTERNAL INSPECTION OF WATER TUBE BOILER, 16,740 TO 33,480 LB./HR. (500 TO 1000 HP)

NO	REFERENCE	WORK UNIT DESCRIPTION	HOURS	UNITS	V38
1	PWV-14-IV	INTERNALLY INSPECT WATER TUBE BOILER	1.42617	JOB	
2	PWV-14-II	EXTERNALLY INSPECT WATER TUBE BOILER	.46372	JOB	

VT-209 = 1.88989 HRS PER JOB

VT-210 ASSIST BOILER INSPECTOR IN INTERNAL, EXTERNAL AND HYDROSTATIC INSPECTION OF FIRE TUBE BOILER, 3,348 TO 6,696 LB./HR. (100 TO 200 HP)

NO	REFERENCE	WORK UNIT DESCRIPTION	HOURS	UNITS	V38
1	PWV-14-III	INTERNALLY INSPECT FIRE TUBE BOILER	.67065	JOB	
2	PWV-14-I	EXTERNALLY INSPECT FIRE TUBE BOILER	.38283	JOB	
3	PWV-14-V	HYDROSTATIC INSPECT FIRE TUBE BOILER	1.48028	JOB	

VT-210 = 2.53376 HRS PER JOB

VT-211 ASSIST BOILER INSPECTOR IN INTERNAL, EXTERNAL AND HYDROSTATIC INSPECTION OF WATER TUBE BOILER, 16,740 TO 33,480 LB./HR. (500 TO 1000 HP)

NO	REFERENCE	WORK UNIT DESCRIPTION	HOURS	UNITS	V38
1	PWV-14-IV	INTERNALLY INSPECT WATER TUBE BOILER	1.42617	JOB	
2	PWV-14-II	EXTERNALLY INSPECT WATER TUBE BOILER	.46372	JOB	
3	PWV-14-VI	HYDROSTATIC INSPECT WATER TUBER BOILER	2.43572	JOB	

VT-211 = 4.32561 HRS PER JOB

VT-212 REMOVE OR INSTALL TUBE SHEET COMPARTMENT DOOR ON FIRE TUBE OR WATER TUBE BOILER.

NO	REFERENCE	WORK UNIT DESCRIPTION	HOURS	UNITS	V38
1	PWV-11-I	OPEN OR CLOSE TUBE SHEET COMPARTMENT DOOR	.08027	JOB	

VT-212 * .08027 HRS PER JOB

VT-213 REMOVE OR INSTALL FIRE BOX DOOR ON FIRE TUBE OR WATER TUBE BOILER

NO	REFERENCE	WORK UNIT DESCRIPTION	HOURS	UNITS	V38
1	PWV-11-II	OPEN OR CLOSE FIRE BOX DOOR	.09180	JOB	

VT-213 * .09180 HRS PER JOB

VT-214 REMOVE OR INSTALL ASH PIT DOOR ON FIRE TUBE OR WATER TUBE BOILER

NO	REFERENCE	WORK UNIT DESCRIPTION	HOURS	UNITS	V38
1	PWV-11-II	OPEN OR CLOSE ASH PIT DOOR	.09180	JOB	

VT-214 * .09180 HRS PER JOB

VT-215 REMOVE OR INSTALL ACCESS PASS DOOR ON FIRE TUBE OR WATER TUBE BOILER

NO	REFERENCE	WORK UNIT DESCRIPTION	HOURS	UNITS	V38
1	PWV-11-II	OPEN OR CLOSE ACCESS PASS DOOR	.09180	JOB	

VT-215 * .09180 HRS PER JOB

VT-216 REMOVE OR INSTALL EXPLOSION-PROOF DOOR ON FIRE TUBE OR WATER TUBE BOILER

NO	REFERENCE	WORK UNIT DESCRIPTION	HOURS	UNITS	V38
1	PWN-10-XI	INSTALL OR REMOVE EXPLOSION-PROOF DOOR	.09214	JOB	

VT-216 * .09214 HRS PER JOB

VT-217 REMOVE OR INSTALL SUPERHEATER DOOR ON WATER TUBE BOILER

NO	REFERENCE	WORK UNIT DESCRIPTION	HOURS	UNITS	V38
1	PWN-10-XI	INSTALL OR REMOVE SUPERHEATER DOOR	.09214	JOB	

VT-217 = .09214 HRS PER JOB

VT-218 REMOVE OR INSTALL PRECIPITATOR DOOR ON WATER TUBE BOILER

NO	REFERENCE	WORK UNIT DESCRIPTION	HOURS	UNITS	V38
1	PWN-10-II	REMOVE OR INSTALL DOOR NUTS	.25536	JOB	
2	PWN-10-II	REMOVE OR INSTALL DOOR BOLTS	.25536	JOB	
3	PWN-10-VIII	REMOVE OR INSTALL STEEL PLATE	.00863	JOB	
4	PWMU-1-8556	WALK AROUND WORK AREA AND EQUIPMENT PERFORMING DUTIES	.00170	JOB	

VT-218 = .52105 HRS PER JOB

VT-219 REMOVE OR INSTALL ACCESS DOOR ON FIRE TUBE OR WATER TUBE BOILER

NO	REFERENCE	WORK UNIT DESCRIPTION	HOURS	UNITS	V38
1	PWV-11-II	OPEN OR CLOSE ACCESS DOOR	.09180	JOB	

VT-219 = .09180 HRS PER JOB

VT-220 REMOVE OR INSTALL CLEAN OUT DOOR ON FIRE TUBE OR WATER TUBE BOILER

NO	REFERENCE	WORK UNIT DESCRIPTION	HOURS	UNITS	V38
1	PWV-11-VIII	REMOVE OR INSTALL CLEAN OUT DOOR	.02538	PLUG	

VT-220 = .02538 HRS PER PLUG

VT-221 REMOVE OR INSTALL PEEPHOLE DOOR ON FIRE TUBE OR WATER TUBE BOILER

NO	REFERENCE	WORK UNIT DESCRIPTION	HOURS	UNITS	V38
1	PWV-11-VIII	REMOVE OR INSTALL PEEPHOLE DOOR	.02538	PLUG	

VT-221 = .02538 HRS PER PLUG

VT-222 REMOVE OR INSTALL BOLTED INSPECTION PLATES ON FIRE TUBE OR WATER TUBE BOILER

NO	REFERENCE	WORK UNIT DESCRIPTION	HOURS	UNITS	V38
1	PWV-11-IV	REMOVE OR INSTALL INSPECTION PLATES (BOLTED)	.09723	COVER	

VT-222 * .09723 HRS PER COVER

VT-223 REMOVE OR INSTALL STEEL SHEET STRIP ON FIRE TUBE OR WATER TUBE BOILER

NO	REFERENCE	WORK UNIT DESCRIPTION	HOURS	UNITS	V39
1	PWN-10-VI	REMOVE OR INSTALL STEEL SHEET STRIP	.01265	JOB	

VT-223 * .01265 HRS PER JOB

VT-224 REMOVE OR INSTALL FIREBOX TOP INSULATION ON BOILER

NO	REFERENCE	WORK UNIT DESCRIPTION	HOURS	UNITS	V38
1	PWN-10-IX	REMOVE OR INSTALL FIREBOX TOP INSULATION	.00166	JOB	

VT-224 * .00166 HRS PER JOB

VT-225 REMOVE OR INSTALL FIREBOX TOP ON BOILER

NO	REFERENCE	WORK UNIT DESCRIPTION	HOURS	UNITS	V38
1	PWN-10-X	REMOVE OR INSTALL FIREBOX TOP	.03618	JOB	

VT-225 * .03618 HRS PER JOB

VT-226 REMOVE OR INSTALL FIREBRICK

NO	REFERENCE	WORK UNIT DESCRIPTION	HOURS	UNITS	V38
1	PWN-10-VI	REMOVE OR INSTALL FIREBRICK	.01265	JOB	

VT-226 * .01265 HRS PER JOB

VT-227 REMOVE OR INSTALL SHELL PLUG ON FIRE TUBE OR WATER TUBE BOILER

NO	REFERENCE	WORK UNIT DESCRIPTION	HOURS	UNITS	V38
1	PWV-11-VIII	REMOVE OR INSTALL SHELL PLUG	.02538	PLUG	

VT-227 = .02538 HRS PER PLUG

VT-228 REMOVE MANHOLE COVER ON FIRE TUBE OR WATER TUBE BOILER

NO	REFERENCE	WORK UNIT DESCRIPTION	HOURS	UNITS	V38
1	PWV-11-IV	REMOVE MANHOLE COVER	.09723	COVER	

VT-228 = .09723 HRS PER COVER

VT-229 REMOVE HANDHOLE COVER ON FIRE TUBE OR WATER TUBE BOILER

NO	REFERENCE	WORK UNIT DESCRIPTION	HOURS	UNITS	V38
1	PWV-11-VI	REMOVE HANDHOLE COVER	.05468	COVER	

VT-229 = .05468 HRS PER COVER

VT-230 INSTALL MANHOLE COVER ON FIRE TUBE OR WATER TUBE BOILER

NO	REFERENCE	WORK UNIT DESCRIPTION	HOURS	UNITS	V38
1	PWV-11-V	INSTALL MANHOLE COVER	.20614	COVER	

VT-230 = .20614 HRS PER COVER

VT-231 INSTALL HANDHOLE COVER ON FIRE TUBE OR WATER TUBE BOILER

NO	REFERENCE	WORK UNIT DESCRIPTION	HOURS	UNITS	V38
1	PWV-11-VII	INSTALL HANDHOLE COVER	.11698	COVER	

VT-231 = .11698 HRS PER COVER

VT-232 PREPARE TO DRAIN BOILER

NO	REFERENCE	WORK UNIT DESCRIPTION	HOURS	UNITS	V38
1	PWV-2-IV	PREPARE TO DRAIN BOILER	.08732	JOB	

VT-232 = .08732 HRS PER JOB

VT-233 FILL BOILER AND INSPECT FOR LEAKS

NO	REFERENCE	WORK UNIT DESCRIPTION	HOURS	UNITS	V38
1	PWV-11-IX	FILL BOILER AND INSPECT FOR LEAKS	.63164	JOB	

VT-233 = .63164 HRS PER JOB

VT-234 CLEAN FIRESIDE OF LIGHTLY SLAGGED WATER TUBE BOILER.--INCLUDES REMOVING SLAG AND LOOSE CINDERS, CLEANING FIREBOX (4'X 10'X 15'), TWO PASSES, AND 166 TUBES (BY SCRAPING).-- DOES NOT INCLUDE ERECTING OR DISMANTLING SCAFFOLDING, VACUUMING TOP OF FIREBOX, CLEANING SUPERHEATER TUBES OR HEADER, AIR PREHEATER OR PRECIPITATOR.

NO	REFERENCE	WORK UNIT DESCRIPTION	HOURS	UNITS	V38
1	PWMU-1-8557	ENTER AND LEAVE MANHOLES 7 TIMES	.06580	JOB	
2	PWS-2-III	REMOVE SLAG AND LOOSE CINDERS FROM PASSES OVER LOWER DRUM	.82880	JOB	
3	PWS-2-IV	LOAD LOOSE SLAG INTO WHEELBARROW AND REMOVE	.42840	JOB	
4	PWA-5-II	MATERIAL HANDLING	.93231	JOB	
5	PWS-2-III	RAKE LOOSE CINDERS FROM FIREBOX FLOOR INTO SUCTION DISCHARGE	.37296	JOB	
6	PWV-2-II	SCRAPE AND BRUSH 30% OF FIREBOX WALLS AND CEILING (470 SF TOTAL) (141 SF SCRAPED)	.02184 1.44948	JOB JOB	
7	PWV-2-II	SCRAPE CLEAN 330 SF OF TUBES IN FIREBOX, PASSES AND VACUUM PASSES	.02184 3.39240	JOB JOB	
8	PWMU-1-8556	WALK AROUND WORK AREA AND EQUIPMENT PERFORMING DUTIES	.01020	JOB	

VT-234 = 7.52403 HRS PER JOB

VT-235 CLEAN FIRESIDE OF HEAVILY SLAGGED WATER TUBE BOILER.--INCLUDES REMOVING SLAG AND LOOSE CINDERS, CLEANING FIREBOX (4'X 10'X 15'), TWO PASSES, AND 110 TUBES (BY SCRAPING).-- DOES NOT INCLUDE ERECTING OR DISMANTLING SCAFFOLDING, VACUUMING TOP OF FIREBOX, CLEANING SUPERHEATER TUBES OR HEADER, AIR PREHEATER OR PRECIPITATOR.

NO	REFERENCE	WORK UNIT DESCRIPTION	HOURS	UNITS	V38
1	PWMU-1-8557	ENTER AND LEAVE MANHOLES 8 TIMES	.07520	JOB	
2	PWS-2-III	REMOVE SLAG AND LOOSE CINDERS FROM PASSES OVER LOWER DRUM	1.65760	JOB	
3	PWS-2-IV	LOAD LOOSE SLAG INTO WHEELBARROW AND REMOVE	1.76120	JOB	
4	PWA-5-II	MATERIAL HANDLING	1.55385	JOB	
5	PWS-2-III	RAKE LOOSE CIDERS FROM FIREBOX FLOOR INTO SUCTION DISCHARGE	.87024	JOB	
6	PWV-2-II	SCRAPE AND BRUSH 70% OF FIREBOX WALLS AND CEILING (470 SF TOTAL) (329 SF SCRAPED)	.02184 3.38212	JOB JOB	
7	PWV-2-II	SCRAPE CLEAN 509 SF OF TUBES IN FIREBOX, PASSES AND VACUUM PASSES	.02184 5.23252	JOB JOB	
8	PWMU-1-8556	WALK AROUND WORK AREA AND EQUIPMENT PERFORMING DUTIES	.01360	JOB	

VT-235 = 14.59001 HRS PER JOB

VT-236 CLEAN FIRESIDE OF LIGHTLY SLAGGED WATER TUBE BOILER.--INCLUDES REMOVING SLAG AND LOOSE CINDERS, CLEANING FIREBOX (8'X 13'X 20'), TWO PASSES, AND 182 TUBES (BY SCRAPING).-- DOES NOT INCLUDE ERECTING OR DISMANTLING SCAFFOLDING, VACUUMING TOP OF FIREBOX, CLEANING SUPERHEATER TUBES OR HEADER, AIR PREHEATER OR PRECIPITATOR.

NO	REFERENCE	WORK UNIT DESCRIPTION	HOURS	UNITS	V38
1	PWMU-1-8557	ENTER AND LEAVE MANHOLES 10 TIMES	.09400	JOB	
2	PWS-2-III	REMOVE SLAG AND LOOSE CINDERS FROM PASSES OVER LOWER DRUM	2.52784	JOB	
3	PWS-2-IV	LOAD LOOSE SLAG INTO WHEELBARROW AND REMOVE	2.42760	JOB	
4	PWA-5-II	MATERIAL HANDLING	2.79693	JOB	
5	PWS-2-III	RAKE LOOSE CINDERS FROM FIREBOX FLOOR INTO SUCTION DISCHARGE	1.57472	JOB	
6	PWV-2-II	SCRAPE AND BRUSH 30% OF FIREBOX WALLS AND CEILING (780 SF TOTAL) (234 SF SCRAPED)	.02184 2.40552	JOB JOB	
7	PWV-2-II	SCRAPE CLEAN TUBES IN FIREBOX, PASSES AND VACUUM PASSES (360 SF)	.02184 3.70080	JOB JOB	
8	PWMU-1-8556	WALK AROUND WORK AREA AND EQUIPMENT PERFORMING DUTIES	.15300	JOB	

VT-236 = 15.72409 HRS PER JOB

VT-237 CLEAN FIRESIDE OF LIGHTLY SLAGGED WATER TUBE BOILER.--INCLUDES REMOVING SLAG AND LOOSE CINDERS, CLEANING FIREBOX (10'X 16'X 20'), TWO PASSES, AND 317 TUBES (BY SCRAPING).-- DOES NOT INCLUDE ERECTING OR DISMANTLING SCAFFOLDING,VACUUMING TOP OF FIREBOX, CLEANING SUPERHEATER TUBES OR HEADER AIR PREHEATER OR PRECIPIITATOR.

NO	REFERENCE	WORK UNIT DESCRIPTION	HOURS	UNITS	V38
1	PWMU-1-8557	ENTER AND LEAVE MANHOLES 12 TIMES	.11280	JOB	
2	PWS-2-III	REMOVE SLAG AND LOOSE CINDERS FROM PASSES OVER LOWER DRUM	3.23232	JOB	
3	PWS-2-IV	LOAD LOOSE SLAG INTO WHEELBARROW AND REMOVE	3.66520	JOB	
4	PWA-5-II	MATERIAL HANDLING	3.31488	JOB	
5	PWS-2-III	RAKE LOOSE CINDERS FROM FIREBOX FLOOR INTO SUCTION DISCHARGE	1.98912	JOB	
6	PWV-2-II	SCRAPE AND BRUSH 30% OF FIREBOX WALLS AND CEILING (1000 SF TOTAL) (300 SF SCRAPED)	.02184 3.08400	JOB JOB	
7	PWV-2-II	SCRAPE CLEAN 631 SF OF TUBES IN FIREBOX, PASSES AND VACUUM PASSES.	.02184 6.48668	JOB JOB	
8	PWMU-1-8556	WALK AROUND WORK AREA AND EQUIPMENT PERFORMING DUTIES	.17000	JOB	

VT-237 = 22.09868 HRS PER JOB

VT-238 CLEAN FIRESIDE OF LIGHTLY SLAGGED WATER TUBE BOILER.--INCLUDES REMOVING SLAG AND LOOSE CINDERS, CLEANING FIREBOX (14'X 20'X 30'), TWO PASSES, AND 400 TUBES (BY SCRAPING).-- DOES NOT INCLUDE ERECTING OR DISMANTLING SCAFFOLDING, VACUUMING TOP OF FIREBOX, CLEANING SUPERHEATER TUBES OR HEADER, AIR PREHEATER OR PRECIPI: TOR.

NO	REFERENCE	WORK UNIT DESCRIPTION	HOURS	UNITS	V38
1	PWMU-1-8557	ENTER AND LEAVE MANHOLE 12 TIMES	.11280	JOB	
2	PWS-2-III	REMOVE SLAG AND LOOSE CINDERS FROM PASSES OVER LOWER DRUM	3.97924	JOB	
3	PWS-2-IV	REMOVE LOOSE SLAG	4.52200	JOB	
4	PWA-5-II	MATERIAL HANDLING	4.04001	JOB	
5	PWS-2-III	RAKE LOOSE CINDERS FROM FIREBOX FLOOR INTO SUCTION DISCHARGE	3.48096	JOB	
6	PWV-2-II	SCRAPE AND BRUSH 30% OF FIREBOX WALLS AND CEILING (1900 SF TOTAL) (570 SF SCRAPED)	.02184 5.85960	JOB JOB	
7	PWV-2-II	SCRAPE CLEAN 794 SF OF TUBES IN FIREBOX, PASSES AND VACUUM PASSES	.02184 8.16232	JOB JOB	
8	PWMU-1-8556	WALK AROUND WORK AREA AND EQUIPMENT PERFORMING DUTIES	.17000	JOB	

VT-238 = 30.36960 HRS PER JOB

VT-239 CLEAN FIRESIDE OF HEAVILY SLAGGED WATER TUBE BOILER.--INCLUDES REMOVING SLAG AND LOOSE CINDERS, CLEANING FIREBOX (8'X 13'X 20'), TWO PASSES, AND 182 TUBES (BY SCRAPING) AND VACUUMING TOP OF FIREBOX.-- DOES NOT INCLUDE ERECTING OR DISMANTLING SCAFFOLDING, CLEANING SUPERHEATER TUBES OR HEADER, AIR PREHEATER OR PRECIPITATOR.

NO	REFERENCE	WORK UNIT DESCRIPTION	HOURS	UNITS	V38
1	PWMU-1-8026	KNOCK DOWN SLAG BY REACHING THROUGH EXPLOSION-PROOF DOOR WITH HAMMER	.11480	JOB	
2	PWMU-1-8027	CLEAN SEVEN INSULATION BATS BY SHAKING IN FIREBOX	.25130	JOB	
3	PWV-2-I	VACUUM TOP OF FIREBOX	.18680 .06240	JOB JOB	
4	PWMU-1-8557	ENTER AND LEAVE MANHOLES 10 TIMES	.09400	JOB	
5	PWS-2-III	REMOVE SLAG AND LOOSE CINDERS FROM PASSES OVER LOWER DRUM	5.92592	JOB	
6	PWS-2-IV	LOAD LOOSE SLAG INTO WHEELBARROW AND REMOVE	6.56880	JOB	
7	PWA-5-II	MATERIAL HANDLING	8.28720	JOB	
8	PWS-2-III	RAKE LOOSE CINDERS FROM FIREBOX FLOOR INTO SUCTION DISCHARGE	3.68816	JOB	
9	PWV-2-II	SCRAPE AND BRUSH 70% OF FIREBOX WALLS AND CEILING (780 SF TOTAL) (546 SF SCRAPED)	.02184 5.61288	JOB JOB	
10	PWV-2-II	SCRAPE CLEAN 837 SF OF TUBES IN FIREBOX, PASSES AND VACUUM PASSES	.02184 8.60436	JOB JOB	
11	PWMU-1-8556	WALK AROUND WORK AREA AND EQUIPMENT PERFORMING DUTIES	.15300	JOB	

VT-239 = 39.59329 HRS PER JOB

VT-240 CLEAN FIRESIDE OF HEAVILY SLAGGED WATER TUBE BOILER.--INCLUDES REMOVING SLAG AND LOOSE CINDERS, CLEANING FIREBOX(10'X 16'X 20'), TWO PASSES, AND 420 TUBES (BY SCRAPING) AND VACUUMING TOP OF FIREBOX.-- DOES NOT INCLUDE ERECTING OR DISMANTLING SCAFFOLDING, CLEANING SUPERHEATER TUBES OR HEADER, AIR PREHEATER OR PRECIPITATOR.

NO	REFERENCE	WORK UNIT DESCRIPTION	HOURS	UNITS	V38
1	PWMU-1-8026	KNOCK DOWN SLAG BY REACHING THROUGH EXPLOSION-PROOF DOOR WITH HAMMER	.11480	JOB	
2	PWMU-1-8027	CLEAN INSULATION BATS BY SHAKING IN FIREBOX	.32310	JOB	
3	PWV-2-I	VACUUM TOP OF FIREBOX	.18680 .09600	JOB JOB	
4	PWMU-1-8557	ENTER AND LEAVE MANHOLES	.11280	JOB	
5	PWS-2-III	REMOVE SLAG AND LOOSE CINDERS FROM PASSES OVER LOWER DRUM	7.54208	JOB	
6	PWS-2-IV	LOAD LOOSE SLAG INTO WHEELBARROW AND REMOVE	8.47280	JOB	
7	PWA-5-II	MATERIAL HANDLING	7.66566	JOB	
8	PWS-2-III	RAKE LOOSE CINDERS FROM FIREBOX FLOOR INTO SUCTION DISCHARGE LINE	4.64128	JOB	
9	PWV-2-II	SCRAPE AND BRUSH 70% OF FIREBOX WALLS AND CEILING (1000 SF TOTAL) (700 SF SCRAPED)	.02184 7.19600	JOB JOB	
10	PWV-2-II	SCRAPE CLEAN 1932 SF OF TUBES IN FIREBOX AND PASSES AND VACUUM PASSES	.02184 19.86096	JOB JOB	
11	PWMU-1-8556	WALK AROUND WORK AREA AND EQUIPMENT PERFORMING DUTIES	.20400	JOB	

VT-240 = 56.45995 HRS PER JOB

VT-241 CLEAN FIRESIDE OF HEAVILY SLAGGED WATER TUBE BOILER.--INCLUDES REMOVING SLAG AND LOOSE CINDERS, CLEANING FIREBOX(14'X 20'X 30'), TWO PASSES, AND 600 TUBES (BY SCRAPING) AND VACUUMING TOP OF FIREBOX.-- DOES NOT INCLUDE ERECTING OR DISMANTLING SCAFFOLDING, CLEANING SUPERHEATER TUBES OR HEADER, AIR PREHEATER OR PRECIPITATOR.

NO	REFERENCE	WORK UNIT DESCRIPTION	HOURS	UNITS	V38
1	PWMU-1-8026	KNOCK DOWN SLAG BY REACHING THROUGH EXPLOSION-PROOF DOOR WITH HAMMER	.26240	JOB	
2	PWMU-1-8027	CLEAN INSULATION BATS BY SHAKING IN FIREBOX	.43080	JOB	
3	PWV-2-I	VACUUM TOP OF FIREBOX	.18680 .16800	JOB JOB	
4	PWMU-1-8557	ENTER AND LEAVE MANHOLE	.14100	JOB	
5	PWS-2-III	REMOVE SLAG AND LOOSE CINDERS FROM PASSES OVER LOWER DRUM	9.28256	JOB	
6	PWS-2-IV	REMOVE LOOSE SLAG	10.47200	JOB	
7	PWA-5-II	MATERIAL HANDLING	9.53028	JOB	
8	PWS-2-III	RAKE LOOSE CINDERS FROM FIREBOX FLOOR INTO SUCTION DISCHARGE	8.12224	JOB	
9	PWV-2-II	SCRAPE AND BRUSH 70% OF WALLS AND CEILINGS IN FIREBOX (1900 SF TOTAL) (1330 SF SCRAPED)	.02184 13.67240	JOB JOB	
10	PWV-2-II	SCRAPE CLEAN 2778 SF OF TUBES IN FIREBOX, PASSES AND VACUUM PASSES	.02184 28.55784	JOB JOB	
11	PWMU-1-8556	WALK AROUND WORK AREA AND EQUIPMENT PERFORMING DUTIES	.23800	JOB	

VT-241 = 81.10799 MRS PER JOB

VT-242 CLEAN WATERSIDE OF WATER TUBE BOILER.-- INCLUDES WASHING INSIDE OF DRUM (5'I.D.X 20' LONG) AND RUNNING WATER (UNDER HIGH PRESSURE) IN 800 TUBE OPENINGS.-- DOES NOT INCLUDE TURBINING TUBES OR REMOVING OR REINSTALLING INTERNAL BAFFLING.

NO	REFERENCE	WORK UNIT DESCRIPTION	HOURS	UNITS	V38
1	PWMU-1-8557	ENTER AND LEAVE DRUM MANHOLE	.01880	JOB	
2	PWV-2-I	CLEAN INSIDE DRUM BY HOSING DOWN	.18680 .18960	JOB JOB	
3	PWV-2-I	WASH TUBE OPENINGS IN BOILER BY FLUSHING WITH WATER	.18680 .48000	JOB JOB	
4	PWA-5-I	MATERIAL HANDLING	.03453	JOB	
5	PWMU-1-8556	WALK AROUND WORK AREA AND EQUIPMENT PERFORMING DUTIES	.05100	JOB	

VT-242 = 1.14753 MRS PER JOB

VT-243 CLEAN WATERSIDE OF WATER TUBE BOILER.-- INCLUDES WASHING AND SCRAPING DRUM (3'I.D.X 10' LONG), TURBINING 60 TUBES (1" TO 3" DIA. X 10' TO 20' LONG). DOES NOT INCLUDE REMOVING OR REINSTALLING INTERNAL BAFFLING.

NO	REFERENCE	WORK UNIT DESCRIPTION	HOURS	UNITS	V38
1	PWMU-1-8552	CONNECT AND DISCONNECT HOSE BIBS	.04360	JOB	
2	PWMU-1-8012	UNWIND AND WIND HOSE SECTIONS	.03560	JOB	
3	PWMU-1-8557	ENTER AND LEAVE DRUM MANHOLE	.07520	JOB	
4	PWQ-14-IV	TURN VALVE ON AND OFF	.06768	JOB	
5	PWV-13-XI	PUSH 3/4" DIA. TURBINING AIR HOSE IN AND PULL OUT 60 (1" TO 3" DIA.) TUBES 10' TO 20' LONG	.19410 1.08000	JOB JOB	
6	PWMU-1-8011	REMOVE AND INSTALL TURBINING HEAD	.29280	JOB	
7	PWV-2-I	CLEAN INSIDE DRUM BY HOSING DOWN	.18680 .05700	JOB JOB	
8	PWV-2-II	SCRAPE 50% OF DRUM INTERIOR	.02184 .49344	JOB JOB	
9	PWA-5-II	MATERIAL HANDLING	.10359	JOB	
10	PWMU-1-8556	WALK AROUND WORK AREA AND EQUIPMENT PERFORMING DUTIES	.00680	JOB	

VT-243 = 2.65844 MRS PER JOB

VT-244 CLEAN WATERSIDE OF WATER TUBE BOILER.-- INCLUDES WASHING AND SCRAPING DRUM (3'I.D. X 10' LONG) TURBINING 110 TUBES (1" TO 3" DIA. X 10' TO 20'LONG). DOES NOT INCLUDE REMOVING OR REINSTALLING INTERNAL BAFFLING.

NO	REFERENCE	WORK UNIT DESCRIPTION	HOURS	UNITS	V38
1	PWMU-1-8552	CONNECT AND DISCONNECT HOSE BIBS	.04360	JOB	
2	PWMU-1-8012	UNWIND AND WIND HOSES	.03560	JOB	
3	PWMU-1-8557	ENTER AND LEAVE DRUM MANHOLE	.08460	JOB	
4	PWQ-14-IV	TURN VALVE ON AND OFF	.07614	JOB	
5	PWV-13-X	PUSH 3/4" DIA. TURBINING AIR HOSE IN AND PULL OUT OF 110 (1" TO 3") TUBES 10' TO 30' LONG	.19410 4.62000	JOB JOB	
6	PWMU-1-8011	REMOVE AND INSTALL TURBINING HEAD	.36600	JOB	
7	PWV-2-I	CLEAN INSIDE DRUM BY HOSING DOWN	.18680 .05700	JOB JOB	
8	PWV-2-II	SCRAPE 50% OF DRUM INTERIOR	.02184 .49344	JOB JOB	
9	PWA-5-II	MATERIAL HANDLING	.10359	JOB	
10	PWMU-1-8556	WALK AROUND WORK AREA AND EQUIPMENT PERFORMING DUTIES	.01020	JOB	

VT-244 = 6.29290 MRS PER JOB

VT-245 CLEAN WATERSIDE OF WATER TUBE BOILER.-- INCLUDES WASHING AND SCRAPING DRUM (3'I.D. X 20' LONG) AND TURBINING 98 TUBES (2 1/2" TO 4" DIA. X 30' TO 50' LONG).-- DOES NOT INCLUDE REMOVING OR REINSTALLING INTERNAL BAFFLING.

NO	REFERENCE	WORK UNIT DESCRIPTION	HOURS	UNITS	V38
1	PWMU-1-8552	CONNECT AND DISCONNECT HOSE BIBS	.04360	JOB	
2	PWMU-1-8012	UNWIND AND WIND HOSES	.03560	JOB	
3	PWMU-1-8557	ENTER AND LEAVE DRUM MANHOLE	.09400	JOB	
4	PWQ-14-IV	TURN VALVE ON AND OFF	.07614	JOB	
5	PWV-13-II	PUSH 1 1/4" DIA. TURBINING AIR HOSE IN AND PULL OUT 98 (2 1/4" TO 4" DIA.) TUBES, 30' TO 50' LONG	.02408 1.29360	JOB JOB	
6	PWMU-1-8011	REMOVE AND INSTALL TURBINING HEAD	.36600	JOB	
7	PWV-2-I	CLEAN INSIDE DRUM BY HOSING DOWN	.18680 .11400	JOB JOB	
8	PWV-2-II	SCRAPE 50% OF DRUM INTERIOR	.02184 .97660	JOB JOB	
9	PWA-5-II	MATERIAL HANDLING	.10359	JOB	
10	PWMU-1-8556	WALK AROUND WORK AREA AND EQUIPMENT PERFORMING DUTIES	.08500	JOB	

VT-245 = 3.42084 MRS PER JOB

VT-246 CLEAN WATERSIDE OF WATER TUBE BOILER.--INCLUDES WASHING AND SCRAPING DRUM (3'I.D. X 20' LONG) AND TURBINING 141 TUBES (2 1/2" TO 4" DIA.X 30' TO 50' LONG).-- DOES NOT INCLUDE REMOVING OR REINSTALLING INTERNAL BAFFLING.

NO	REFERENCE	WORK UNIT DESCRIPTION	HOURS	UNITS	V38
1	PWMU-1-8552	CONNECT AND DISCONNECT HOSE BIBS	.04360	JOB	
2	PWMU-1-8012	UNWIND AND WIND HOSES	.03560	JOB	
3	PWMU-1-8557	ENTER AND LEAVE DRUM MANHOLE	.10340	JOB	
4	PWQ-14-IV	TURN VALVE ON AND OFF	.08460	JOB	
5	PWV-13-X	PUSH 1 1/2" TURBINING AIR HOSE IN AND PULL OUT OF 141 (2 1/2" TO 4") TUBES, 30' TO 50' LONG	.19410 5.92200	JOB JOB	
6	PWMU-1-8011	REMOVE AND INSTALL TURBINING HEAD	.36600	JOB	
7	PWV-2-I	CLEAN INSIDE DRUM BY HOSING DOWN	.18680 .11400	JOB JOB	
8	PWV-2-II	SCRAPE 50% OF DRUM INTERIOR	.02184 .97660	JOB JOB	
9	PWA-5-II	MATERIAL HANDLING	.10359	JOB	
10	PWMU-1-8556	WALK AROUND WORK AREA AND EQUIPMENT PERFORMING DUTIES	.10200	JOB	

VT-246 = 8.25412 MRS PER JOB

VT-247 CLEAN WATERSIDE OF WATER TUBE BOILER.-- INCLUDES WASHING AND SCRAPING DRUM (3'I.D. X 20' LONG) AND TURBINING 240 TUBES (2 1/2" TO 4" DIA. X 30 TO 50' LONG).-- DOES NOT INCLUDE REMOVING OR REINSTALLING INTERNAL BAFFLING.

NO **	REFERENCE	WORK UNIT DESCRIPTION	HOURS	UNITS	V38
1	PWMU-1-8552	CONNECT AND DISCONNECT HOSE BIBS	.04360	JOB	
2	PWMU-1-8012	UNWIND AND WIND HOSES	.03560	JOB	
3	PWMU-1-8557	ENTER AND LEAVE DRUM MANHOLE	.11280	JOB	
4	PWQ-14-IV	TURN VALVE ON AND OFF	.10152	JOB	
5	PWV-13-X	PUSH 1 1/2" TURBINING AIR HOSE IN AND PULL OUT OF 240 (2 1/2" TO 4") TUBES 30' TO 50' LONG	.19410 10.08000	JOB JOB	
6	PWMU-1-8011	REMOVE AND INSTALL TURBINING HEADS	.36600	JOB	
7	PWV-2-I	CLEAN INSIDE DRUM BY HOSING DOWN	.18680 .11400	JOB JOB	
8	PWV-2-II	SCRAPE 50% OF DRUM INTERIOR	.02184 .97660	JOB JOB	
9	PWA-5-II	MATERIAL HANDLING	.10359	JOB	
10	PWMU-1-8556	WALK AROUND WORK AREA AND EQUIPMENT PERFORMING DUTIES	.11900	JOB	

VT-247 * 12.45545 HRS PER JOB

VT-248 CLEAN WATERSIDE OF WATER TUBE BOILER.-- INCLUDES WASHING AND SCRAPING DRUM (3'I.D. X 20' LONG) AND TURBINING 321 TUBES (1 1/2" TO 4" DIA.X 30' TO 50' LONG).-- DOES NOT INCLUDE REMOVING OR REINSTALLING INTERNAL BAFFLING.

NO **	REFERENCE	WORK UNIT DESCRIPTION	HOURS	UNITS	V38
1	PWMU-1-8552	CONNECT AND DISCONNECT HOSE BIBS	.04360	JOB	
2	PWMU-1-8012	UNWIND AND WIND HOSES	.03560	JOB	
3	PWMU-1-8557	ENTER AND LEAVE DRUM MANHOLE	.14100	JOB	
4	PWQ-14-IV	TURN VALVE ON AND OFF	.11844	JOB	
5	PWV-13-X	PUSH 1 1/2" TURBINING AIR HOSE IN AND PULL OUT OF 321 (2 1/2" TO 4") TUBES 30' TO 50' LONG	.19410 13.48200	JOB JOB	
6	PWMU-1-8005	REMOVE AND INSTALL TURBINING HEAD	.02400	JOB	
7	PWV-2-I	CLEAN INSIDE OF DRUM BY HOSING DOWN	.18680 .11400	JOB JOB	
8	PWV-2-II	SCRAPE 50% OF DRUM INTERIOR	.02184 .97660	JOB JOB	
9	PWA-5-II	MATERIAL HANDLING	.10359	JOB	
10	PWMU-1-8556	WALK AROUND WORK AREA AND EQUIPMENT PERFORMING DUTIES	.13600	JOB	

VT-248 * 15.57757 HRS PER JOB

VT-249 CLEAN WATERSIDE OF WATER TUBE BOILER.-- INCLUDES WASHING AND SCRAPING DRUM (5'I.D. X 20' LONG) AND TURBINING 475 TUBES (2 1/2" TO 4" DIA.X 30' TO 50' LONG).-- DOES NOT INCLUDE REMOVING OR REINSTALLING INTERNAL BAFFLING.

NO	REFERENCE	WORK UNIT DESCRIPTION	HOURS	UNITS	V38
1	PWMU-1-8552	CONNECT AND DISCONNECT HOSE BIBS	.04360	JOB	
2	PWMU-1-8012	UNWIND AND WIND HOSES	.03560	JOB	
3	PWMU-1-8557	ENTER AND LEAVE DRUM MANHOLE	.18800	JOB	
4	PWQ-14-IV	TURN VALVE ON AND OFF	.15228	JOB	
5	PWV-13-X	PUSH 1 1/2" TURBINING AIR HOSE IN AND PULL OUT OF 475 (2 1/2" TO 4") TUBES 30' TO 50' LONG	.19410 19.95000	JOB JOB	
6	PWMU-1-8005	REMOVE AND INSTALL TURBINE HEAD	.02800	JOB	
7	PWV-2-I	CLEAN INSIDE DRUM BY HOSING	.18680 .18960	JOB JOB	
8	PWV-2-II	SCRAPE 50% OF DRUM INTERIOR	.02184 1.62424	JOB JOB	
9	PWA-5-II	MATERIAL HANDLING	.10359	JOB	
10	PWMU-1-8556	WALK AROUND WORK AREA AND EQUIPMENT PERFORMING DUTIES	.15300	JOB	

VT-249 = 22.87064 HRS PER JOB

VT-250 CLEAN WATERSIDE OF WATER TUBE BOILER.-- INCLUDES WASHING AND SCRAPING DRUM (5' I.D. X 20' LONG) AND TURBINING 590 TUBES (2 1/2" TO 4" DIA.X 30' TO 50' LONG).-- DOES NOT INCLUDE REMOVING OR REINSTALLING INTERNAL BAFFLING.

NO	REFERENCE	WORK UNIT DESCRIPTION	HOURS	UNITS	V38
1	PWMU-1-8552	CONNECT AND DISCONNECT HOSE BIBS	.04360	JOB	
2	PWMU-1-8012	UNWIND AND WIND HOSES	.03560	JOB	
3	PWMU-1-8557	ENTER AND LEAVE DRUM MANHOLE	.10340	JOB	
4	PWQ-14-IV	TURN VALVE ON AND OFF	.16920	JOB	
5	PWV-13-X	PUSH 1 1/2" TURBINING AIR HOSE IN AND PULL OUT OF 590 (2 1/2" TO 4") TUBES 30' TO 50' LONG	.19410 24.78000	JOB JOB	
6	PWMU-1-8011	REMOVE AND INSTALL TURBINING HEAD	.58560	JOB	
7	PWV-2-I	CLEAN INSIDE DRUM BY HOSING DOWN	.18680 .18960	JOB JOB	
8	PWV-2-II	SCRAPE 50% OF DRUM INTERIOR	.02184 1.62424	JOB JOB	
9	PWA-5-II	MATERIAL HANDLING	.20718	JOB	
10	PWMU-1-8556	WALK AROUND WORK AREA AND EQUIPMENT PERFORMING DUTIES	.15300	JOB	

VT-250 = 28.29415 HRS PER JOB

VT-251 CLEAN WATERSIDE OF WATER TUBE BOILER.-- INCLUDES WASHING AND SCRAPING DRUM (5' I.D. X 20' LONG) AND TURBINING 732 TUBES (2 1/2" TO 4" DIA.X 30' TO 50' LONG).-- DOES NOT INCLUDE REMOVING OR REINSTALLING INTERNAL BAFFLING.

NO	REFERENCE	WORK UNIT DESCRIPTION	HOURS	UNITS	V38
1	PWMU-1-8552	CONNECT AND DISCONNECT HOSE BIBS	.04360	JOB	
2	PWMU-1-8012	UNWIND AND WIND HOSES	.03560	JOB	
3	PWMU-1-8557	ENTER AND LEAVE DRUM MANHOLE	.22560	JOB	
4	PWQ-14-IV	TURN VALVE ON AND OFF	.16920	JOB	
5	PWV-13-X	PUSH 1 1/2" TURBINING AIR HOSE IN AND PULL OUT OF 732 (2 1/2" TO 4") TUBES 30' TO 50' LONG	.19410 30.74400	JOB JOB	
6	PWMU-1-8005	REMOVE AND INSTALL TURBINING HEADS	.03200	JOB	
7	PWV-2-I	CLEAN INSIDE DRUM BY HOSING DOWN	.18680 .18960	JOB JOB	
8	PWV-2-II	SCRAPE 50% OF DRUM INTERIOR	.02184 1.62424	JOB JOB	
9	PWA-5-II	MATERIAL HANDLING	.20718	JOB	
10	PWMU-1-8556	WALK AROUND WORK AREA AND EQUIPMENT PERFORMING DUTIES	.17000	JOB	

VT-251 = 33.84375 HRS PER JOB

VT-252 CLEAN FIRESIDE OF AIR PREHEATER.-- INCLUDES WASHING 432 TUBES (2" DIA. X 20' LONG) WITH 1 1/2" WATER HOSE AND CLEANING "SMOKE" BOX UNDER AIR PREHEATER TUBES USING AIR HOSE AND SHOVEL.

NO	REFERENCE	WORK UNIT DESCRIPTION	HOURS	UNITS	V38
1	PWMU-1-8552	CONNECT AND DISCONNECT HOSE TO BIBS	.04360	JOB	
2	PWMU-1-8012	UNWIND AND WIND HOSE SECTIONS	.03560	JOB	
3	PWQ-14-IV	TURN VALVE ON AND OFF	.01692	JOB	
4	PWMU-1-8010	PUSH WATER HOSE IN AND PULL OUT OF 432 (2") TUBES 20' LONG	11.31840	JOB	
5	PWMU-1-8556	WALK AROUND WORK AREA AND EQUIPMENT PERFORMING DUTIES	.13600	JOB	
6	PWMU-1-8557	ENTER AND LEAVE "SMOKE" BOX	.01880	JOB	
7	PWV-2-I	HOSE 150 SF OF FLY ASH OUT OF "SMOKE" BOX	.18680 .09000	JOB JOB	
8	PWS-2-III	SHOVEL HARDENED FLY ASH OUT OF "SMOKE" BOX	.16576	JOB	
9	PWA-5-II	MATERIAL HANDLING	.10359	JOB	

VT-252 = 12.11547 HRS PER JOB

VT-253 CLEAN FIRESIDE OF AIR PREHEATER.-- INCLUDES WASHING 675 TUBES (2 1/2" DIA. X 30' LONG) WITH 1 1/2" WATER HOSE AND CLEANING "SMOKE" BOX UNDER AIR PREHEATER TUBES USING AIR HOSE AND SHOVEL.

NO	REFERENCE	WORK UNIT DESCRIPTION	HOURS	UNITS	V38
1	PWMU-1-8552	CONNECT AND DISCONNECT HOSE BIBS	.04360	JOB	
2	PWMU-1-8012	UNWIND AND WIND HOSES	.03560	JOB	
3	PWQ-14-IV	TURN VALVE ON AND OFF	.01692	JOB	
4	PWMU-1-8010	PUSH WATER HOSE IN AND OUT OF 675 (2 1/2"DIA.) TUBES 30' LONG	17.68500	JOB	
5	PWMU-1-8556	WALK AROUND WORK AREA AND EQUIPMENT PERFORMING DUTIES	.17000	JOB	
6	PWMU-1-8557	ENTER AND LEAVE "SMOKE" BOX	.01880	JOB	
7	PWV-2-I	HOSE FLY ASH OUT OF "SMOKE" BOX * AVG. OF 250 SQ. FT.	.18680 .15000	JOB JOB	
8	PWS-2-III	SHOVEL HARDENED FLY ASH OUT OF "SMOKE" BOX	.58016	JOB	
9	PWA-5-II	MATERIAL HANDLING	.20718	JOB	
10	PWQ-14-IV	TURN VALVE ON AND OFF	.01692	JOB	

VT-253 * 19.11097 HRS PER JOB

VT-254 CLEAN FIRESIDE OF AIR PREHEATER.--INCLUDES WASHING 1024 TUBES (2 1/2" DIA.X 30' LONG) WITH 1 1/2" WATER HOSE AND CLEANING "SMOKE" BOX UNDER AIR PREHEATER TUBES USING AIR HOSE AND SHOVEL.

NO	REFERENCE	WORK UNIT DESCRIPTION	HOURS	UNITS	V38
1	PWMU-1-8552	CONNECT AND DISCONNECT HOSE BIBS	.04360	JOB	
2	PWMU-1-8012	UNWIND AND WIND HOSES	.03560	JOB	
3	PWQ-14-IV	TURN VALVE ON AND OFF	.03384	JOB	
4	PWMU-1-8010	PUSH WATER HOSE IN AND PULL OUT OF 1024 (2 1/2" TUBES 30' LONG	26.82880	JOB	
5	PWMU-1-8556	WALK AROUND WORK AREA AND EQUIPMENT PERFORMING DUTIES	.20400	JOB	
6	PWMU-1-8557	ENTER AND LEAVE "SMOKE" BOX	.01880	JOB	
7	PWV-2-I	HOSE FLY ASH OUT OF "SMOKE" BOX * AVG. OF 200 SQ. FT.	.18680 .12000	JOB JOB	
8	PWS-2-III	SHOVEL HARDENED FLY ASH OUT OF "SMOKE" BOX	.45584	JOB	
9	PWA-5-II	MATERIAL HANDLING	.20718	JOB	

VT-254 * 28.13445 HRS PER JOB

VT-255 CLEAN FIRESIDE OF PRECIPITATOR.-- INCLUDES PUSHING AN AIR HOSE DOWN 36 TUBES (4" DIA. X 8' LONG) AND BLOWING OUT THE COMPARTMENT AT TOP OF TUBES.

NO	REFERENCE	WORK UNIT DESCRIPTION	HOURS	UNITS	V38
1	PWQ-14-IV	TURN VALVE ON AND OFF	.00846	JOB	
2	PWMU-1-8557	ENTER AND LEAVE PRECIPITATOR OPENING	.01880	JOB	
3	PWV-13-VII	PUSH AIR HOSE IN AND PULL OUT OF 36 (4") TUBES 8' TO 12' LONG	.19410 1.03680	JOB JOB	
4	PWV-2-I	BLOW CLEAN INSIDE PRECIPITATOR COMPARTMENT * AVG. OF 90 SQ. FT.	.18680 .05400	JOB JOB	
5	PWMU-1-8556	WALK AROUND WORK AREA AND EQUIPMENT PERFORMING DUTIES	.06800	JOB	
6	PWA-5-II	MATERIAL HANDLING.	.20718	JOB	

VT-255 * 1.77414 HRS PER JOB

VT-256 CLEAN SUPERHEATER HAVING 120 TUBES IN PASSES OVER LOWER DRUM USING SCRAPER, AND CLEAN HEADER BOX BY VACUUMING 250 SQ. FT. OF FINE FLY ASH.

NO	REFERENCE	WORK UNIT DESCRIPTION	HOURS	UNITS	V38
1	PWV-2-I	VACUUM SUPERHEATER BOX CONTAINING 250 SF OBTAINABLE AREA	.18680 .15000	JOB JOB	
2	PWMU-1-8556	WALK AROUND WORK AREA AND EQUIPMENT PERFORMING DUTIES	.06800	JOB	
3	PWA-5-II	MATERIAL HANDLING	.20718	JOB	
4	PWMU-1-8557	ENTER AND LEAVE MANHOLE	.02820	JOB	
5	PWV-2-II	SCRAPE CLEAN SUPERHEATER TUBES IN PASS OVER LOWER DRUM	.02184 3.87556	JOB JOB	

VT-256 * 4.53758 HRS PER JOB

VT-257 CLEAN 8' LONG FIRE TUBES IN FIRE TUBE BOILER WITH SCRAPER.

NO	REFERENCE	WORK UNIT DESCRIPTION	HOURS	UNITS	V38
1	PWV-13-I	CLEAN BOILER TUBES 8' LONG WITH SCRAPER	.02408 .00880	JOB TUBE	

VT-257 * .02408 HRS PER JOB + .00880 HRS PER TUBE

VT-258 CLEAN 8' LONG FIRE TUBES IN FIRE TUBE BOILER WITH PNEUMATIC TURBINING TOOL.

NO	REFERENCE	WORK UNIT DESCRIPTION	HOURS	UNITS	V38
1	PWV-13-VI	CLEAN BOILER TUBES 8' LONG WITH PNEUMATIC TURBINING TOOL	.19410 .00960	JOB TUBE	

VT-258 = .19410 HRS PER JOB + .00960 HRS PER TUBE

VT-259 CLEAN 12' LONG FIRE TUBES IN FIRE TUBE BOILER WITH SCRAPER.

NO	REFERENCE	WORK UNIT DESCRIPTION	HOURS	UNITS	V38
1	PWV-13-II	CLEAN BOILER TUBES 12' LONG WITH SCRAPER	.02408 .01320	JOB TUBE	

VT-259 = .02408 HRS PER JOB + .01320 HRS PER TUBE

VT-260 CLEAN 12' LONG FIRE TUBES IN FIRE TUBE BOILER WITH PNEUMATIC TURBINING TOOL.

NO	REFERENCE	WORK UNIT DESCRIPTION	HOURS	UNITS	V38
1	PWV-13-VII	CLEAN BOILER TUBES 12' LONG WITH PNEUMATIC TURBINING TOOL	.19410 .01440	JOB TUBE	

VT-260 = .19410 HRS PER JOB + .01440 HRS PER TUBE

VT-261 CLEAN 16' LONG FIRE TUBES IN FIRE TUBE BOILER WITH SCRAPER.

NO	REFERENCE	WORK UNIT DESCRIPTION	HOURS	UNITS	V38
1	PWV-13-III	CLEAN BOILER TUBES 16' LONG WITH SCRAPER	.02408 .01760	JOB TUBE	

VT-261 = .02408 HRS PER JOB + .01760 HRS PER TUBE

VT-262 CLEAN 16' LONG FIRE TUBES IN FIRE TUBE BOILER WITH PNEUMATIC TURBINING TOOL.

NO	REFERENCE	WORK UNIT DESCRIPTION	HOURS	UNITS	V38
1	PWV-13-VIII	CLEAN BOILER TUBES 16' LONG WITH PNEUMATIC TURBINING TOOL	.19410 .01920	JOB TUBE	

VT-262 = .19410 HRS PER JOB + .01920 HRS PER TUBE

VT-263 CLEAN 20' LONG FIRE TUBES IN FIRE TUBE BOILER WITH PNEUMATIC TURBINING TOOL.

NO	REFERENCE	WORK UNIT DESCRIPTION	HOURS	UNITS	V38
1	PWV-13-IX	CLEAN BOILER TUBES 20' LONG WITH PNEUMATIC TURBINING TOOL.	.19410 .02400	JOB TUBE	

VT-263 = .19410 HRS PER JOB + .02400 HRS PER TUBE

VT-264 CLEAN (1) TUBE SHEET COMPARTMENT IN FIRE TUBE BOILER WITH VACUUM CLEANER.

NO	REFERENCE	WORK UNIT DESCRIPTION	HOURS	UNITS	V38
1	PWV-13-IV	CLEAN TUBE SHEET COMPARTMENT	.74708	COMPARTMT	

VT-264 = .74708 HRS PER COMPARTMT

VT-265 CLEAN FIRE BOX IN FIRE TUBE BOILER

NO	REFERENCE	WORK UNIT DESCRIPTION	HOURS	UNITS	V38
1	PWV-13-V	CLEAN FIRE BOX	.44148	JOB	

VT-265 = .44148 HRS PER JOB

VT-266 CLEAN INTERIOR OF DRUM OF FIRE TUBE BOILER (1,205 LB./HR. OR 36 HP).

NO	REFERENCE	WORK UNIT DESCRIPTION	HOURS	UNITS	V38
1	PWV-2-I	WASH INTERIOR OF DRUM	.18680 .24300	JOB JOB	
2	4210	INSPECT DRUM	.30000	JOB	
3	PWV-11-IV	REMOVE MANHOLE COVER	.09723	JOB	
4	PWV-11-V	INSTALL MANHOLE COVER	.20614	JOB	
5	PWA-5-I	MATERIAL HANDLING	.06906	JOB	

VT-266 = 1.10223 HRS PER JOB

VT-267 CLEAN INTERIOR OF DRUM OF FIRE TUBE BOILER (4,185 LB./HR. OR 125 HP).

NO	REFERENCE	WORK UNIT DESCRIPTION	HOURS	UNITS	V38
1	PWV-2-I	WASH INTERIOR OF DRUM	.18680	JOB	
			.61500	JOB	
2	4210	INSPECT DRUM	.37500	JOB	
3	PWV-11-IV	REMOVE MANHOLE COVER	.09723	JOB	
4	PWV-11-V	INSTALL MANHOLE COVER	.20614	JOB	
5	PWA-5-I	MATERIAL HANDLING	.06906	JOB	

VT-267 = 1.54923 HRS PER JOB

VT-268 CLEAN INTERIOR OF DRUM OF FIRE TUBE BOILER(5,858 LB./HR. OR 175 HP).

NO	REFERENCE	WORK UNIT DESCRIPTION	HOURS	UNITS	V38
1	PWV-2-I	WASH INTERIOR OF DRUM	.18680	JOB	
			1.11360	JOB	
2	4210	INSPECT DRUM	.45000	JOB	
3	PWV-11-IV	REMOVE MANHOLE COVER	.09723	JOB	
4	PWV-11-V	INSTALL MANHOLE COVER	.20614	JOB	
5	PWA-5-I	MATERIAL HANDLING	.06906	JOB	

VT-268 = 2.12283 HRS PER JOB

VT-269 CLEAN INTERIOR OF DRUM OF FIRE TUBE BOILER (6,696 LB./HR. OR 200 HP).

NO	REFERENCE	WORK UNIT DESCRIPTION	HOURS	UNITS	V38
1	PWV-2-I	WASH INTERIOR OF DRUM	.15680	JOB	
			1.54860	JOB	
2	4210	INSPECT DRUM	.52500	JOB	
3	PWV-11-IV	REMOVE MANHOLE COVER	.09723	JOB	
4	PWV-11-V	INSTALL MANHOLE COVER	.20614	JOB	
5	PWA-5-I	MATERIAL HANDLING	.10359	JOB	

VT-269 = 2.66736 HRS PER JOB

VT-270 REMOVE BOILER TUBE (UP TO 4" O.D. X 20' LONG) THROUGH MANHOLE OR HANDHOLE (WITHOUT CUTTING INTO SECTIONS) AND INSTALL.

NO	REFERENCE	WORK UNIT DESCRIPTION	HOURS	UNITS	V38
1	PWV-15-IV	REMOVE BOILER TUBE UP TO 20' LONG AND 4" O.D. THROUGH MANHOLE/HANDHOLE WITHOUT CUTTING TUBE INTO SECTIONS	.28186	TUBE	
2	PWV-15-V	INSTALL BOILER TUBE UP TO 20' LONG AND 4" O.D.	.61214	TUBE	

VT-270 = .89400 HRS PER TUBE

VT-271 REMOVE BOILER TUBE (UP TO 4" O.D. X 20' LONG) THROUGH MANHOLE (CUTTING INTO SECTIONS) AND INSTALL.

NO	REFERENCE	WORK UNIT DESCRIPTION	HOURS	UNITS	V38
1	PWV-15-III	REMOVE BOILER TUBE UP TO 20' LONG AND 4" O.D. THROUGH MANHOLE BY CUTTING INTO SMALLER PIECES	.32211	TUBE	
2	PWV-15-V	INSTALL BOILER TUBE UP TO 20' LONG AND 4" O.D.	.61214	TUBE	

VT-271 = .93425 HRS PER TUBE

VT-272 REMOVE AND INSTALL BOILER TUBE (UP TO 4" O.D. X 20' LONG) THROUGH OWN HOLE.

NO	REFERENCE	WORK UNIT DESCRIPTION	HOURS	UNITS	V38
1	PWV-15-II	REMOVE BOILER TUBE UP TO 20' LONG AND 4" O.D. THROUGH OWN HOLE	.40156	TUBE	
2	PWV-15-V	INSTALL BOILER TUBE UP TO 20' LONG AND 4" O.D. THROUGH OWN HOLE	.61214	TUBE	

VT-272 = 1.01370 HRS PER TUBE

VT-273 REMOVE AIR PREHEATER TUBE (WITHOUT CUTTING INTO SECTIONS) AND INSTALL.

NO	REFERENCE	WORK UNIT DESCRIPTION	HOURS	UNITS	V38
1	PWV-15-IV	REMOVE BOILER TUBE UP TO 20' LONG AND 4" O.D. WITHOUT CUTTING INTO SECTIONS	.28186	JOB	
2	PWV-15-VII	INSTALL AIR PREHEATER TUBE UP TO 20' LONG AND 4" O.D. USING HOIST	.64270	JOB	

VT-273 = .92456 HRS PER JOB

VT-274 REMOVE AND INSTALL TUBE SHEET COMPARTMENT DOOR AND DOOR FRAME.

NO	REFERENCE	WORK UNIT DESCRIPTION	HOURS	UNITS	V38
1	PWV-15-I	REMOVE AND INSTALL TUBE SHEET COMPARTMENT DOOR AND DOOR FRAME	.80605	JOB	

VT-274 = .80605 HRS PER JOB

VT-275 INSTALL BOILER TUBE (UP TO 4" O.D. X 20' LONG) USING HOIST.

NO	REFERENCE	WORK UNIT DESCRIPTION	HOURS	UNITS	V38
1	PWV-15-VI	INSTALL BOILER TUBE UP TO 20' LONG AND 4" O.D. USING HOIST	.71638	J08	

VT-275 * .71638 HRS PER J08

VT-276 REMOVE AND INSTALL PUSH NIPPLES ON A CAST IRON LOW PRESSURE SECTIONAL BOILER.

NO	REFERENCE	WORK UNIT DESCRIPTION	HOURS	UNITS	V38
1	PWQ-14-IV	OPEN AND CLOSE SMALL VALVE	.11844	J08	
2	PWQ-14-IV	OPEN AND CLOSE SMALL VALVE	.11844	J08	
3	PWMU-1-8552	REMOVE AND INSTALL FLANGE NUT	.78480	J08	
4	PWMU-1-8552	REMOVE AND INSTALL FLANGE BOLT	.78480	J08	
5	PWMU-1-8013	REMOVE AND INSTALL GASKET	.32340	J08	
6	PWQ-4-VI	REMOVE AND INSTALL UNION	.49744	J08	
7	PWQ-4-I	REMOVE AND INSTALL PIPE SECTIONS LESS THAN 2" LONG	.43836	J08	
8	PWMU-1-8552	REMOVE AND INSTALL DRAW NUT	.08720	J08	
9	PWMU-1-8552	REMOVE AND INSTALL DRAW BOLT	.08720	J08	
10	PWN-10-IX	REMOVE AND INSTALL BOILER SECTION	.00332	J08	
11	PWMU-1-8021	REMOVE AND INSTALL NIPPLE	.14700	J08	

VT-276 * 3.39039 HRS PER J08

VT-277 CLEAN AND INSPECT UNIT HEATER IN PLACE.

NO	REFERENCE	WORK UNIT DESCRIPTION	HOURS	UNITS	V38
1	PWMU-1-8558	CLIMB UP AND DOWN SCAFFOLD	.05680	J08	
2	PWQ-14-II	MOVE SCAFFOLD	.00992 .00935	J08 J08	
3	PWMU-1-8000	REMOVE AND INSTALL SCREW	.17800	J08	
4	PWMU-1-8021	REMOVE AND INSTALL PANEL	.04900	J08	
5	PWQ-40-II	LUBRICATE MOTOR	.01172	J08	
6	PWMU-1-8028	CLEAN MOTOR	.08440	J08	
7	PWMU-1-8028	WIRE BRUSH COILS	.08440	J08	
8	PWMU-1-8028	CLEAN HOUSING	.08440	J08	
9	4202	INSPECT FOR LEAKS	.01200	J08	

VT-277 * .57999 HRS PER J08

VT-278 REMOVE, CLEAN, INSPECT AND INSTALL UNIT HEATER.

NO	REFERENCE	WORK UNIT DESCRIPTION	HOURS	UNITS	V38
1	PWB-6-II	LOWER AND RAISE UNIT WITH BLOCK AND TACKLE	.64348	J09	
2	PWB-4-I	[illegible] AND UNLASH UNIT	.20584	J08	
3	PWMU-1-8552	REMOVE AND INSTALL MOUNTING NUTS	.08720	J08	
4	PWMU-1-8552	REMOVE AND INSTALL MOUNTING BOLTS	.08720	J08	
5	PWQ-4-VI	REMOVE AND INSTALL UNION	.24872	J08	
6	PWQ-4-VI	REMOVE AND INSTALL VALVE	.06218	J08	
7	PWQ-4-VI	REMOVE AND INSTALL NIPPLE	.12436	J08	
8	PWQ-4-VI	REMOVE AND INSTALL STRAINER	.06218	J08	
9	PWQ-14-IV	OPEN AND CLOSE VALVE	.01692	J08	
10	PWA-5-II	POSITION UNIT	.20719	J09	
11	PWMU-1-8558	CLIMB UP AND DOWN SCAFFOLD	.11360	J09	
12	PWQ-14-II	MOVE SCAFFOLD	.00992 .01122	J08 J09	
13	PWMU-1-8552	REMOVE AND INSTALL BOLT	.04810	J03	
14	PWMU-1-9000	REMOVE AND INSTALL SCREW	.17800	J08	
15	PWMU-1-8021	REMOVE AND INSTALL PANEL	.04903	J08	
16	PWG-40-II	LUBRICATE MOTOR	.01172	J09	
17	PWMU-1-8031	CLEAN MOTOR	.13700	J08	
18	PWMU-1-8028	WIRE BRUSH COILS	.08440	J08	
19	PWMU-1-8031	CLEAN HOUSING	.13700	J08	
20	4211	INSPECT FOR LEAKS	.29200	J09	
21	PWA-5-II	MATERIAL HANDLING	.41436	J08	

VT-278 = 3.28157 MRS PER J09

VT-279 REMOVE OLD UNIT HEATER AND INSTALL NEW.

NO	REFERENCE	WORK UNIT DESCRIPTION	HOURS	UNITS	V38
1	PWB-6-II	LOWER AND RAISE UNIT WITH BLOCK AND TACKLE	.64348	HEATER	
2	PWB-4-I	LASH AND UNLASH UNIT	.20594	HEATER	
3	PWMU-1-8582	REMOVE AND INSTALL MOUNTING NUTS	.08720	HEATER	
4	PWMU-1-8552	REMOVE AND INSTALL MOUNTING BOLTS	.08720	HEATER	
5	PWQ-4-VI	REMOVE AND INSTALL UNION	.24872	HEATER	
6	PWQ-4-VI	REMOVE AND INSTALL VALVE	.06218	HEATER	
7	PWQ-4-VI	REMOVE AND INSTALL NIPPLE	.12436	HEATER	
8	PWQ-4-VI	REMOVE AND INSTALL STRAINER	.06218	HEATER	
9	PWQ-14-IV	OPEN AND CLOSE VALVE	.01692	HEATER	
10	PWA-5-II	POSITION UNIT	.20718	HEATER	
11	PWMU-1-8558	CLIMB UP AND DOWN SCAFFOLD	.11360	HEATER	
12	PWQ-14-II	MOVE SCAFFOLD	.00992 .00936	HEATER HEATER	
13	4211	INSPECT FOR LEAKS	.29200	HEATER	
14	PWEA-52-I	LAY OUT STOCK FOR HANGER	.80160	HEATER	
15	PWQ-2-I	CUT STOCK FOR HANGER	.14668	HEATER	
16	PWC-15-III	DRILL HOLES	.03080 .10148	HEATER HEATER	
17	PWMU-1-8021	INSTALL HANGERS	.09800	HEATER	
18	PWA-5-II	MATERIAL HANDLING	.41436	HEATER	

VT-279 = 3.76504 MRS PER HEATER

VT-280 REMOVE, DISASSEMBLE, CLEAN, INSPECT, TEST, REPAIR, ASSEMBLE, AND INSTALL ANY SIZE UNIT HEATER. INCLUDES REPAIR AN AVERAGE OF TWO LEAKS. USE OF SCAFFOLDING IS INCLUDED BUT ERECTION AND DISMANTLING IS NOT.

NO	REFERENCE	WORK UNIT DESCRIPTION	HOURS	UNITS	V38
1	PWB-6-II	LOWER AND RAISE UNIT WITH BLOCK AND TACKLE	.64348	JOB	
2	PWB-4-I	LASH AND UNLASH UNIT	.20584	JOB	
3	PWMU-1-8552	REMOVE AND INSTALL MOUNTING NUTS	.08720	JOB	
4	PWMU-1-8552	REMOVE AND INSTALL MOUNTING BOLTS	.08720	JOB	
5	PWQ-4-VI	REMOVE AND INSTALL UNION	.24972	JOB	
6	PWQ-4-VI	REMOVE AND INSTALL VALVE	.06218	JOB	
7	PWQ-4-VI	REMOVE AND INSTALL NIPPLE	.12436	JOB	
8	PWQ-4-VI	REMOVE AND INSTALL STRAINER	.06218	JOB	
9	PWQ-14-IV	OPEN AND CLOSE VALVE	.01692	JOB	
10	PWA-5-II	POSITION UNIT	.20718	JOB	
11	PWMU-1-8558	CLIMB UP AND DOWN SCAFFOLD	.11360	JOB	
12	PWQ-14-II	MOVE SCAFFOLDING	.00992 .00935	JOB JOB	
13	PWMU-1-8552	REMOVE AND INSTALL BOLTS	.08720	JOB	
14	PWMU-1-8000	REMOVE AND INSTALL SCREWS	.17800	JOB	
15	PWMU-1-8011	REMOVE AND INSTALL PANEL	.07320	JOB	
16	PWMU-1-8011	REMOVE AND INSTALL MOTOR SUPPORT	.07320	JOB	
17	PWMU-1-8022	REMOVE AND INSTALL MOTOR AND FAN	.20560	JOB	
18	PWG-4C-II	LUBRICATE MOTOR	.01172	JOB	
19	PWMU-1-8031	CLEAN MOTOR	.13700	JOB	
20	PWMU-1-8028	WIRE BRUSH COILS	.16880	JOB	
21	PWMU-1-8026	CLEAN SMALL PARTS	.16400	JOB	
22	PWMU-1-8031	CLEAN HOUSING	.13700	JOB	
23	PWQ-4-I	REMOVE AND INSTALL FITTING	.14512	JOB	
24	PWQ-4-I	CONNECT AND DISCONNECT TEST LINES	.07306	JOB	
25	PWQ-14-IV	TURN STEAM ON AND OFF	.02538	JOB	
26	PWQ-4-VI	REMOVE AND INSTALL NIPPLE	.24872	JOB	
27	PWQ-4-VI	REMOVE AND INSTALL REDUCER	.12436	JOB	
28	PWQ-4-VI	REMOVE AND INSTALL ELBOW	.12436	JOB	
29	4205	INSPECT FOR LEAKS DURING REPAIR	.18900	JOB	
30	4211	INSPECT FOR LEAKS AFTER REPAIR	.29200	JOB	
31	PWEA-6-VI	SOLDER LEAKS IN ANY SIZE HEATING UNIT PIPES AS REQUIRED	.16060 .08080	JOB JOB	
32	PWMU-1-8026	CLEAN AREA AROUND LEAKS	.03280	JOB	
33	PWQ-17-I	CUT OFF SECTION OF PIPE	.16857	JOB	
34	PWEA-6-VI	SEAL ENDS OF PIPE	.16060 .04040	JOB JOB	
35	PWA-5-II	MATERIAL HANDLING	.41436	JOB	

VT-280 = 5.33467 MHS PER JOB

VT-281 INSTALL GAS OR OIL-FIRED WALL-TYPE FURNACE.

NO	REFERENCE	WORK UNIT DESCRIPTION	HOURS	UNITS	V38
1	PWA-5-II	MATERIAL HANDLING	.10359	JOB	
2	PWMU-1-8022	POSITION FURNACE	.10280	JOB	
3	PWQ-4-VI	CONNECT UNIONS	.03109	JOB	
4	PWMU-1-8010	INSTALL GRILLS AND PANELS	.05240	JOB	
5	PWMU-1-8000	INSTALL FASTENER	.05340	JOB	
6	4209	CHECK OPERATION	.16700	JOB	
7	PWQ-14-IV	TURN VALVE ON AND OFF	.00846	JOB	
8	PWMU-1-8021	CONNECT VENT STACK	.02450	JOB	
9	PWMU-1-8000	INSTALL SCREWS	.01780	JOB	

VT-281 = .56104 HRS PER JOB

VT-282 CLEAN ONE GAS-FILLED WALL FURNACE.

NO	REFERENCE	WORK UNIT DESCRIPTION	HOURS	UNITS	V38
1	PWQ-14-I	TURN VALVE OFF AND ON	.01270	JOB	
2	PWQ-4-VI	DISCONNECT AND CONNECT UNION	.06218	JOB	
3	PWMU-1-8010	REMOVE AND INSTALL PANEL AND GRILL	.10480	JOB	
4	PWMU-1-3000	REMOVE AND INSTALL FASTENER	.10680	JOB	
5	PWMU-1-8031	CLEAN FURNACE AND WALL OPENINGS	.13700	JOB	
6	4209	CHECK OPERATION	.16700	JOB	

VT-282 = .59048 HRS PER JOB

VT-283 REMOVE AND INSTALL GAS OR OIL FIRED WALL FURNACE

NO	REFERENCE	WORK UNIT DESCRIPTION	HOURS	UNITS	V38
1	PWA-5-II	MATERIAL HANDLING	.20718	JOB	
2	PWQ-14-IV	TURN VALVE ON AND OFF	.00846	JOB	
3	PWQ-4-VI	DISCONNECT AND CONNECT UNION	.06218	JOB	
4	PWMU-1-8013	REMOVE AND INSTALL PANEL AND GRILL	.18480	JOB	
5	PWMU-1-8000	REMOVE AND INSTALL FASTENERS	.10680	JOB	
6	PWMU-1-8022	REMOVE AND INSTALL FURNACE	.20560	JOB	
7	4211	CHECK OPERATION	.29200	JOB	

VT-283 = 1.06702 HRS PER JOB

VT-284 INSTALL NEW UNIT HEATER

NO **	REFERENCE **********	WORK UNIT DESCRIPTION **********	MOURS **********	UNITS *********	V38
1	PWB-6-II	RAISE UNIT WITH BLOCK AND TACKLE	.32174	JOB	
2	PWB-4-I	LASH AND UNLASH UNIT	.10292	JOB	
3	PWMU-1-8552	INSTALL MOUNTING BOLTS	.04360	JOB	
4	PWMU-1-8552	INSTALL MOUNTING NUTS	.04360	JOB	
5	PWQ-4-VI	INSTALL UNION	.12436	JOB	
6	PWQ-4-VI	INSTALL VALVE	.06219	JOB	
7	PWQ-4-VI	INSTALL NIPPLE	.06218	JOB	
8	PWQ-4-VI	INSTALL STRAINER	.03109	JOB	
9	PWQ-14-IV	OPEN VALVE	.00846	JOB	
10	PWQ-5-II	POSITION UNIT	.23301	JOB	
11	PWMU-1-8558	CLIMB UP AND DOWN SCAFFOLD	.04260	JOB	
12	PWQ-14-II	MOVE SCAFFOLD	.00392 .01122	JOB JOB	
13	PWEA-52-I	LAY OUT STOCK FOR HANGER	.80160	JOB	
14	PWQ-2-I	CUT STOCK FOR HANGERS	.14868	JOB	
15	PWC-15-III	DRILL HOLES	.03080 .10148	JOB JOB	
16	PWMU-1-8021	INSTALL HANGERS	.09800	JOB	
17	4211	INSPECT FOR LEAKS	.29200	JOB	
18	PWA-5-II	MATERIAL HANDLING	.20719	JOB	

VT-284 = 2.77661 HRS PER JOB

VT-285 CLEAN ONE OIL-FIRED FORCED HOT AIR WALL FURNACE.

NO **	REFERENCE **********	WORK UNIT DESCRIPTION **********	MOURS **********	UNITS *********	V38
1	PWQ-14-IV	OPEN AND CLOSE VALVE	.00846	JOB	
2	PWQ-20-II	DRAIN OIL	.03040	JOB	
3	PWMU-1-8000	REMOVE AND INSTALL FASTENERS	.07120	JOB	
4	PWQ-4-VI	DISCONNECT AND CONNECT	.06218	JOB	
5	PWMU-1-8021	REMOVE AND INSTALL BURNER	.04900	JOB	
6	PWMU-1-8013	DISASSEMBLE AND ASSEMBLE BURNER PARTS	.18480	JOB	
7	PWMU-1-8026	CLEAN PARTS	.04920	JOB	
8	PWMU-1-8030	CLEAN BURNER	.06790	JOB	
9	PWMU-1-8030	CLEAN FIREBOX	.06790	JOB	
10	PWMU-1-8030	CLEAN HOT AIR DUCT	.06790	JOB	
11	PWMU-1-8013	REMOVE AND INSTALL FILTER	.04620	JOB	
12	5600	LIGHT BURNER AND ADJUST FLAME	.01300	JOB	
13	PWMU-1-8027	CLEAN MOTOR	.03590	JOB	
14	PWG-40-II	LUBRICATE MOTOR	.01172	JOB	
15	4209	CHECK AND INSPECT	.16700	JOB	

VT-285 = .93276 HRS PER JOB

VT-286 DISASSEMBLE, CLEAN, INSPECT AND ASSEMBLE APARTMENT SIZE OIL-FIRED SPACE HEATER (2 1/2' X 2 1/2' X 4') OR OIL-FIRED FLOOR FURNACE.-- DOES NOT INCLUDE CLEANING CHIMNEY OR CARBURETOR.

NO **	REFERENCE **********	WORK UNIT DESCRIPTION **********	HOURS **********	UNITS *********	V38
1	PWMU-1-8010	REMOVE AND INSTALL BAFFLES	.02620	J09	
2	PWMU-1-8027	CLEAN INSIDE HEATER	.10770	J09	
3	PWMU-1-8027	CLEAN OUTSIDE HEATER	.07180	J08	
4	PWQ-14-IV	TURN OIL TANK VALVE OFF AND ON	.03384	J05	
5	PWMU-1-8552	DISCONNECT AND CONNECT OIL LINE TO FILTER	.02180	J08	
6	PWMU-1-8552	REMOVE AND INSTALL NUT ON FILTER CONTAINER	.02180	J08	
7	PWMU-1-8026	CLEAN FILTER	.01640	J09	
8	PWMU-1-8000	REMOVE AND INSTALL SCREWS ON CARBURETOR TOP	.07120	J09	
9	PWMU-1-8552	REMOVE AND INSTALL OIL LINE FROM HEATER TO CARBURETOR	.04360	J05	
10	PWMU-1-8552	REMOVE AND INSTALL STRAINER	.02180	J08	
11	4208	CHECK AND INSPECT	.04200	J09	
12	PWA-5-I	MATERIAL HANDLING	.06906	J09	

VT-286 = .54720 HRS PER JOB

VT-287 DISASSEMBLE, CLEAN, INSPECT AND ASSEMBLE APARTMENT SIZE OIL-FIRED SPACE HEATER (2 1/2" X 2 1/2" X 4") OR OIL-FIRED FLOOR FURNACE.--INCLUDES CLEANING CHIMNEY AND CARBURETOR.

NO **	REFERENCE **********	WORK UNIT DESCRIPTION **********	HOURS **********	UNITS *********	V38
1	PWMU-1-8000	REMOVE AND INSTALL SCREW IN PIPE	.03560	J09	
2	PWMU-1-8011	REMOVE AND INSTALL PIPE FROM HEATER TO CHIMNEY	.07320	J08	
3	PWA-5-II	CARRY PIPE TO BE CLEANED AND RETURN	.10359	J05	
4	PWMU-1-8027	CLEAN PIPE	.07180	J08	
5	PWMU-1-8052	CLIMB UP AND DOWN LADDER	.04140	J09	
6	PWMU-1-8027	CLEAN CHIMNEY	.07180	J05	
7	PWMU-1-8010	REMOVE AND INSTALL BAFFLES	.02620	J05	
8	PWMU-1-8027	CLEAN INSIDE HEATER	.10770	J09	
9	PWMU-1-8027	CLEAN OUTSIDE HEATER	.07180	J05	
10	PWQ-14-IV	TURN OIL TANK VALVE OFF AND ON	.03384	J09	
11	PWMU-1-8552	DISCONNECT AND CONNECT OIL LINE TO FILTER	.02180	J08	
12	PWMU-1-8552	REMOVE AND INSTALL NUT ON FILTER CONTAINER	.02180	J09	
13	PWMU-1-8026	CLEAN FILTER	.01640	J08	
14	PWMU-1-8000	REMOVE AND INSTALL FOUR SCREWS ON CARBURETOR TOP	.07120	J08	
15	PWMU-1-8552	REMOVE AND INSTALL OIL LINE FROM HEATER TO CARBURETOR	.04360	J09	
16	PWMU-1-8552	REMOVE AND INSTALL STRAINER	.02180	J08	
17	PWMU-1-8552	REMOVE AND INSTALL OIL LINE FROM HEATER TO OIL STORAGE	.02180	J05	
18	4208	CHECK AND INSPECT	.04200	J08	
19	PWA-5-I	MATERIAL HANDLING	.06906	J09	

VT-287 = .96639 HRS PER JOB

VT-288 INSTALL 30-GALLON GAS-FIRED HOT WATER HEATER AND FILL TANK.

NO **	REFERENCE **********	WORK UNIT DESCRIPTION **********	HOURS **********	UNITS *********	V38
1	PWA-5-II	MATERIAL HANDLING	.10359	JOB	
2	PWMU-1-8022	POSITION HEATER	.10280	JOB	
3	PWQ-4-VI	CONNECT UNIONS	.09327	JOB	
4	4209	CHECK OPERATION	.16700	JOB	
5	PWQ-14-IV	TURN VALVE ON AND OFF	.00846	JOB	
6	PWMU-1-8021	CONNECT VENT STACK	.02450	JOB	
7	PWMU-1-8000	ATTACH SCREWS	.01780	JOB	
8	2147	FILL TANK	.08100	JOB	

VT-288 = .59842 HRS PER JOB

VT-289 REMOVE AND INSTALL 30-GALLON GAS-FIRED HOT WATER HEATER

NO **	REFERENCE **********	WORK UNIT DESCRIPTION **********	HOURS **********	UNITS *********	V38
1	PWA-5-II	MATERIAL HANDLING	.20719	JOB	
2	PWQ-4-VI	DISCONNECT AND CONNECT UNION	.18654	JOB	
3	PWMU-1-8022	REMOVE AND INSTALL HEATER	.20560	JOB	
4	PWQ-14-IV	TURN VALVE ON AND OFF	.00846	JOB	
5	PWQ-20-II	DRAIN AND FILL 30-GALLON TANK	.45600	JOB	
6	4209	CHECK OPERATION	.16700	JOB	

VT-289 = 1.23078 HRS PER JOB

VT-290 CLEAN 30-GALLON GAS-FIRED HOT WATER HEATER

NO **	REFERENCE **********	WORK UNIT DESCRIPTION **********	HOURS **********	UNITS *********	V38
1	PWQ-14-IV	CLOSE AND OPEN VALVE	.00846	JOB	
2	PWMU-1-8030	CLEAN AND ADJUST MAIN BURNER, PILOT AND THERMO-COUPLE	.20370	JOB	
3	PWMU-1-8027	CLEAN COMBUSTION CHAMBER AND BOTTOM OF TANK	.03590	JOB	
4	PWQ-20-II	FLUSH OUT HEATER	.45600	JOB	
5	4208	CHECK OPERATION OF SAFETY PILOT	.04200	JOB	
6	5600	LIGHT MAIN BURNER AND ADJUST FLAME	.01300	JOB	
7	4210	ASCERTAIN THAT HEATER CUTS OFF AT CORRECT TEMPERATURE	.07500	JOB	
8	4208	CHECK OPERATION OF RELIEF VALVE	.04200	JOB	

VT-290 = .87606 HRS PER JOB

VT-291 DISASSEMBLE, CLEAN, LUBRICATE, INSPECT, AND REASSEMBLE APARTMENT SIZE GAS UNIT HEATER (2 1'2" X 2 1/2" X 5"). INCLUDES CLEANNING CHIMNEY.

NO	REFERENCE	WORK UNIT DESCRIPTION	HOURS	UNITS	V38
1	PWMU-1-8005	DISCONNECT AND CONNECT ELECTRIC PLUG FROM RECEPTACLE	.00400	JOB	
2	PWMU-1-8013	REMOVE AND INSTALL TOP FRONT COVER	04620	JOB	
3	PWMU-1-8006	TURN GAS VALVE OFF AND ON	.01340	JOB	
4	PWMU-1-8000	REMOVE AND INSTALL SCREWS	.03560	JOB	
5	PWMU-1-8010	REMOVE BOTTOM FRONT COVER	.01310	JOB	
6	PWMU-1-8005	REMOVE AND INSTALL FILTER	.00400	JOB	
7	PWMU-1-8000	DISCONNECT AND CONNECT THERMALCOUPLING AT MAIN LINE	.01780	JOB	
8	PWMU-1-8000	DISCONNECT AND CONNECT PILOT COUPLING AT MAIN LINE	.01780	JOB	
9	PWMU-1-8000	REMOVE AND INSTALL SCREWS TO PILOT LIGHT ASSEMBLY	.03560	JOB	
10	PWMU-1-8010	REMOVE AND INSTALL PILOT LIGHT ASSEMBLY	.02620	JOB	
11	PWMU-1-8000	LOOSEN AND TIGHTEN TWO THUMB SCREWS	.03560	JOB	
12	PWMU-1-8010	REMOVE AND INSTALL BURNERS	.05240	JOB	
13	PWMU-1-8030	KNOCK SOOT FROM SIDE WALLS	.06790	JOB	
14	PWMU-1-8030	VACUUM AND WIPE UNIT	.06790	JOB	
15	PWG-40-II	OIL MOTOR AND FAN	.02344	JOB	
16	PWMU-1-8000	DISCONNECT AND CONNECT SOLENOID VALVE NUT	.01780	JOB	
17	PWMU-1-8005	REMOVE AND INSTALL VALVE FROM SOLENOID	.00400	JOB	
18	PWMU-1-8026	CLEAN VALVE AND WIPE WITH OIL	.01640	JOB	
19	PWMU-1-8000	REMOVE AND INSTALL PILOT LINE	.01780	JOB	
20	PWMU-1-8000	REMOVE AND INSTALL FITTING TO PILOT LIGHT NOZZLE	.01780	JOB	
21	PWMU-1-8026	CLEAN NOZZLE	.01640	JOB	
22	PWMU-1-8010	REPLACE BOTTOM FRONT COVER	.01310	JOB	
23	5600	LIGHT PILOT AND ADJUST	.01300	JOB	
24	4209	TURN ON BURNERS AND CHECK FOR FAN TO COME ON	.16700	JOB	

VT-291 = .74423 HRS PER JOB

VT-292 CLEAN, INSPECT AND LUBRICATE COLD WATER BLOWER UNIT WITH 2-CENTRIFUGAL (SQUIRREL CAGE) FANS (8" DIA.).
--INCLUDES DISASSEMBLE AND ASSEMBLE; VACUUM AND WIPE INSIDE UNIT AND BLOWER ASSEMBLY; INSPECT; AND LUBRICATE BLOWER BEARINGS.

NO **	REFERENCE **********	WORK UNIT DESCRIPTION **********	HOURS **********	UNITS **********	V38
1	PWMU-1-8000	REMOVE AND INSTALL SCREWS	.03560	J08	
2	PWMU-1-8021	REMOVE AND INSTALL FRONT COVER	.04900	J08	
3	PWMU-1-8005	DISCONNECT AND CONNECT ELECTRIC PLUG FROM RECEPTACLE	.00400	J08	
4	PWMU-1-8552	REMOVE AND INSTALL MOUNTING BOLTS AND NUTS	.08720	J08	
5	PWMU-1-8021	REMOVE AND INSTALL FRAME AND BLOWER ASSEMBLY	.04900	J08	
6	PWMU-1-8012	REMOVE AND INSTALL FILTER	.01780	J08	
7	PWMU-1-8027	VACUUM AND WIPE INSIDE UNIT	.03590	J08	
8	PWMU-1-8030	VACUUM AND WIPE BLOWER ASSEMBLY	.06790	J08	
9	PWG-40-II	LUBRICATE BLOWER	.01172	J08	

VT-292 * .35612 MRS PER J08

VT-293 CLEAN, INSPECT, ADJUST AND LUBRICATE BLOWER UNIT WITH 4-CENTRIFUGAL (SQUIRREL CAGE) FANS (8" DIA.).
--INCLUDES DISASSEMBLE AND ASSEMBLE; VACUUM AND WIPE INSIDE UNIT, BLOWER AND COVERS; INSPECT; MAKE ADJUSTMENTS; LUBRICATE MOVING PARTS.

NO **	REFERENCE **********	WORK UNIT DESCRIPTION **********	HOURS **********	UNITS **********	V38
1	PWMU-1-8000	REMOVE AND INSTALL SCREWS	.05340	J08	
2	PWMU-1-8021	REMOVE AND INSTALL FRONT COVER	.04900	J08	
3	PWMU-1-8005	TURN MOTOR OFF AND ON WITH KEY	.00400	J08	
4	PWMU-1-8000	LOOSEN AND TIGHTEN SCREWS	.07120	J08	
5	PWMU-1-8010	REMOVE AND INSTALL COVER PLATES	.05240	J08	
6	PWMU-1-8552	REMOVE AND INSTALL THUMB SCREWS TO TOP COVER	.08720	J08	
7	PWMU-1-8021	REMOVE AND INSTALL TOP COVER	.04900	J08	
8	PWMU-1-8005	REMOVE AND INSTALL ELECTRIC PLUG FROM RECEPTACLE	.00400	J08	
9	PWMU-1-8000	REMOVE AND INSTALL NUTS AND BOLTS ON BLOWER UNIT	.07120	J08	
10	PWMU-1-8011	REMOVE AND INSTALL BLOWER UNIT	.14640	J08	
11	2581	INSPECT BLOWER, ALL MOVING PARTS AND SURROUNDING AREA	.00464	J08	
12	PWMU-1-8000	REMOVE AND INSTALL TWO BRACKET SCREWS	.03560	J08	
13	PWMU-1-8012	TURN MOTOR TO OIL AND RETURN	.01780	J08	
14	PWMU-1-8000	REMOVE AND INSTALL TWO OIL PLUG COVER SCREWS	.03560	J08	
15	PWG-40-II	OIL MOTOR AT TWO LOCATIONS	.01172	J08	
16	PWMU-1-8012	REMOVE AND INSTALL BOTTOM FILTER	.01780	J08	
17	PWMU-1-8000	REMOVE AND INSTALL 3 THUMB SCREWS TO OUTSIDE VENT	.01780	J08	
18	PWMU-1-8013	REMOVE AND INSTALL PLATE TO VENT	.04620	J08	
19	PWMU-1-8013	REMOVE AND INSTALL FILTER TO OUTSIDE VENT	.04620	J08	
20	PWMU-1-8028	VACUUM AND WIPE INSIDE UNIT, BLOWER, AND COVERS	.08440	J08	
21	PWN-3-I	OIL DAMPER AND MOVING PARTS	.00354 .02352	J08 J08	

VT-293 * .93261 MRS PER J08

VT-294 REGULATE ROOM AND BLOWER UNIT THERMOSTAT,

NO **	REFERENCE	WORK UNIT DESCRIPTION	HOURS	UNITS	V38
1	PWMU-1-8000	REMOVE AND INSTALL SCREWS IN THERMOSTAT COVER TO REMOVE COVER	.03560	JOB	
2	PWMU-1-8005	REMOVE AND INSTALL THERMOSTAT COVER	.00400	JOB	
3	PWMU-1-8000	REMOVE AND INSTALL COVER SCREW TO NEEDLE VALVE	.01780	JOB	
4	PWMU-1-8006	OPEN AND CLOSE NEEDLE VALVE	.01340	JOB	
5	PWMU-1-8552	INSTALL AND REMOVE BRANCH LINE AIR GAUGE	.02180	JOB	
6	PWMU-1-8553	ADJUST THERMOSTAT	.30870	JOB	
7	PWMU-1-8000	REMOVE AND INSTALL PIN VALVE SET SCREW	.01780	JOB	
8	PWMU-1-8006	ADJUST SET SCREW	.00670	JOB	
9	PWMU-1-8010	REMOVE PIN VALVE GAUGE	.01310	JOB	
10	PWMU-1-8556	WALK AROUND WORK AREA AND EQUIPMENT PERFORMING DUTIES	.00850	JOB	
11	PWMU-1-8000	REMOVE AND INSTALL SCREWS IN COVER * AVG. OF TWO SCREWS	.03560	JOB	
12	PWMU-1-8010	REMOVE AND INSTALL COVER PLATE	.02620	JOB	
13	PWMU-1-8000	REMOVE AND INSTALL SCREWS TO REHEAT AND VENTILATING THERMOSTAT * AVG OF TWO SCREWS	.03560	JOB	
14	PWMU-1-8010	REMOVE AND INSTALL THERMOSTAT COVER	.02620	JOB	
15	PWMU-1-8000	REMOVE AND INSTALL SCREW IN FILTER LINE	.01780	JOB	
16	PWMU-1-8013	REMOVE AND INSTALL AIR GAUGE IN LINE	.04620	JOB	
17	5600	BLEED AIR LINE DOWN	.01300	JOB	
18	PWMU-1-8006	ADJUST GAGE	.00670	JOB	
19	3955	WAIT FOR UNIT TO COOL	.20000	JOB	
20	PWPM-55-707	PLACE THERMOSTAT ON TOP OF UNIT AND READ	.11656	JOB	
21	PWMU-1-8006	ADJUST UNIT BY TURNING SCREW	.00670	JOB	
22	3955	WAIT FOR UNIT TO COOL	.20000	JOB	
23	PWPM-55-707	PLACE THERMOSTAT ON TOP OF UNIT AND READ	.11656	JOB	
24	PWMU-1-8556	WALK AROUND WORK AREA AND EQUIPMENT PERFORMING DUTIES	.00850	JOB	

VT-294 = 1.00302 HRS PER JOB

VT-295 HOT AIR FURNACE, GUN TYPE, (UP TO 770,000 B.T.U.)
--OFF-SEASON MAINTENANCE

NO **	REFERENCE **********	WORK UNIT DESCRIPTION **********	HOURS **********	UNITS **********	V38
1	PMV-9-I	CLEAN FUEL OIL, RENEW ELEMENT AND GASKET	.07584	FURNACE	
2	PMV-9-II	CLEAN, INSPECT, ADJUST ELECTRODE/NOZZLE ASSEMBLY	.17254	FURNACE	
3	PMV-9-III	SERVICE FUEL UNIT - - INCLUDES FUEL OIL PUMP, FORCED DRAFT BLOWER AND MOTOR	.16876	FURNACE	
4	PMV-9-IV	SERVICE FURNACE FIREBOX AND FLUE	.41183	FURNACE	
5	PMV-9-V	SERVICE FURNACE STACK SWITCH	.08928	FURNACE	
6	PMV-9-VI	SERVICE AIR CIRCULATION FAN AND MOTOR - - UP TO 1 HP	.20958	FURNACE	
7	PMV-9-VII	CONDUCT FURNACE OPERATIONAL CHECK	.11021	FURNACE	

VT-295 * 1.23804 HRS PER FURNACE

VT-296 ANALYZE SAMPLES OF BOILER WATER FROM FIRE TUBE BOILERS THAT ARE TREATED WITH CHEMICALS.
@ AN AVG. OF 8-BOILER SAMPLES ARE ANALYZED DAILY.

NO **	REFERENCE **********	WORK UNIT DESCRIPTION **********	HOURS **********	UNITS **********	V38
1	PMV-4-I	LAY OUT AND RETURN TO STORAGE REQUIRED EQUIPMENT	.00422	BOILER	
2	PMV-4-II	SET UP PRELIMINARY EQUIPMENT FOR TEST	.00166	BOILER	
3	PMV-4-III	SET UP AND SECURE SOLU-BRIDGE GAUGE	.00881	BOILER	
4	PMV-4-IV	PREPARE DILUTED STANNOUS CHLORIDE SOLUTION	.00673	BOILER	
5	PMV-4-V	FILL USABLE SIZE CONTAINERS WITH CONTENTS FROM LARGE CONTAINER	.02141	BOILER	
6	PMV-4-VI	PERFORM TEST TO DETERMINE SOLID CONTENT OF SAMPLE	.03409	BOILER	
7	PMV-4-VII	PERFORM TEST TO DETERMINE PHOSPHATE CONTENT OF SAMPLE	.09863	BOILER	
8	PMV-4-VIII	PERFORM TEST TO DETERMINE TANNIN CONTENT OF SAMPLE	.04250	BOILER	
9	PMV-4-IX	PERFORM TEST TO DETERMINE PRESENCE OF CAUSTICITY IN SAMPLE	.05569	BOILER	
10	PMV-4-X	WASH FRAGILE EQUIPMENT USED IN ANALYZING BOILER WATER SAMPLES AND CLEAN UP WORK AREA, COUNTER, AND SINK	.00844	BOILER	
11	PMV-4-XI	PREPARE BOILER WATER SAMPLES TO MAIL TO LABORATORY 1-TIME PER MONTH	.00037	BOILER	

VT-296 * .27255 HRS PER BOILER

VT-297 CLEAN FUEL OIL FILTER: RENEW ELEMENT AND GASKET

NO	REFERENCE	WORK UNIT DESCRIPTION	HOURS	UNITS	W38
1	3842	WALK AROUND WORK AREA	.00300	FILTER	
2	2090	CLOSE/CHECK CLOSED FUEL OIL SHUT-OFF VALVE AND OPEN	.00630	FILTER	
3	2301	OBTAIN AND ASIDE WIPING CLOTH	.00520	FILTER	
4	PWMU-1-8000	UNCOUPLE AND ASSEMBLE FILTER HOUSING AND BASE	.01780	FILTER	
5	PWMU-1-8005	DISENGAGE AND FIT UP FILTER HOUSING--FILTER ELEMENT INCLUDED	.00400	FILTER	
6	3293	REMOVE AND DISCARD FILTER GASKET	.00039	FILTER	
7	3293	REMOVE AND DISCARD FILTER ELEMENT	.00039	FILTER	
8	3159	DUMP REMAINING OIL FROM FILTER HOUSING	.00170	FILTER	
9	3231	WIPE FILTER HOUSING CLEAN WITH FILTER CLOTH	.00412	FILTER	
10	2896	OBTAIN BOX CONTAINING NEW FILTER ELEMENT AND GASKET	.00250	FILTER	
11	6184	OPEN BOX AND REMOVE FILTER ELEMENT AND GASKET	.00484	FILTER	
12	6196	INSERT NEW FILTER ELEMENT IN HOUSING	.00049	FILTER	
13	3738	PLACE NEW GASKET ON FILTER HOUSING	.00097	FILTER	
14	6190	WIPE UP SPILLED FUEL OIL	.00199	FILTER	
15	2581	INSPECT FILTER FOR LEAKS	.01392	FILTER	
16	3231	WIPE TOOL WITH CLOTH	.00824	FILTER	

VT-297 * .07584 MH PER FILTER

VT-298 CLEAN, INSPECT, ADJUST ELECTRODE/NOZZLE ASSEMBLY

NO	REFERENCE	WORK UNIT DESCRIPTION	HOURS	UNITS	V38
1	3842	WALK AROUND WORK AREA	.00300	ASSEMBLY	
2	2901	OBTAIN AND ASIDE WIPING CLOTH	.00520	ASSEMBLY	
3	PWMU-1-8000	REMOVE AND INSTALL SCREW	.03560	ASSEMBLY	
4	PWMU-1-8005	REMOVE AND INSTALL ACCESS PANEL OR SWING HINGED TRANSFORMER ASIDE AND BACK IN PLACE	.00400	ASSEMBLY	
5	PWMU-1-8000	BREAK AND MAKE UP NOZZLE LINE CONNECTION (FERRULE OR FLARE NUT)	.01780	ASSEMBLY	
6	PWMU-1-8006	REMOVE AND INSTALL HOLD-DOWN DEVICE FOR NOZZLE LINE (LOCK NUT, SET SCREW, LOCK LEVER, ETC.)	.01340	ASSEMBLY	
7	6190	DETACH AND ATTACH ELECTRODE LEAD (SPRING CLIP)	.00112	ASSEMBLY	
8	PWMU-1-8005	MANEUVER ELECTRODE/NOZZLE ASSEMBLY OUT OF AND INTO AIR TUBE	.01600	ASSEMBLY	
9	PWMU-1-8000	REMOVE AND INSTALL BURNER NOZZLE (WITH STRAINER)	.01780	ASSEMBLY	
10	6190	EXTRACT AND INSERT BURNER NOZZLE STRAINER	.00224	ASSEMBLY	
11	2580	INSPECT NOZZLE AND NOZZLE STRAINER	.00565	ASSEMBLY	
12	1134	CLEAN NOZZLE WITH WIRE BRUSH	.00238	ASSEMBLY	
13	3197	WASH NOZZLE STRAINER WITH FUEL OIL	.03414	ASSEMBLY	
14	0629	CLEAN ELECTRODE WITH EMORY CLOTH	.02552	ASSEMBLY	
15	2580	INSPECT ELECTRODES FOR PROPER GAP AND CLEARANCE	.00566	ASSEMBLY	
16	0913	ADJUST ELECTRODES ELECTRODE, AVG. 1-TIME OUT OF 2	.00280	ASSEMBLY	
17	3231	WIPE TOOLS WITH CLOTH	.00324	ASSEMBLY	
18	6180	WIPE UP SPILLED FUEL OIL	.00199	ASSEMBLY	

VT-298 * .17254 HRS PER ASSEMBLY

VT-299 SERVICE FUEL UNIT--INCLUDES FUEL OIL PUMP, FORCED DRAFT BLOWER AND MOTOR

NO	REFERENCE	WORK UNIT DESCRIPTION	HOURS	UNITS	V38
1	3842	WALK AROUND WORK AREA	.00060	UNIT	
2	2901	OBTAIN AND ASIDE WIPING CLOTH	.01040	UNIT	
3	PWMU-1-8000	REMOVE AND INSTALL CAP SCREW (PUMP HEAD)	.14240	UNIT	
4	PWMU-1-8005	DISASSEMBLE AND FIT UP PUMP HEAD	.00400	UNIT	
5	3293	REMOVE PUMP HEAD GASKET	.00039	UNIT	
6	3293	REMOVE STRAINER FROM PUMP HEAD	.00039	UNIT	
7	2896	OBTAIN CARTON CONTAINING NEW STRAINER AND GASKET	.00059	UNIT	
8	6184	REMOVE STRAINER AND GASKET FROM CARTON	.00097	UNIT	
9	3197	CLEAN EXISTING STRAINER AND GASKET	.00331	UNIT	
10	6196	INSTALL STRAINER IN PUMP HOUSING	.00049	UNIT	
11	3738	PLACE GASKET ON PUMP HOUSING	.00097	UNIT	
12	3152	LUBRICATE PUMP/FORCED DRAFT BLOWER MOTOR	.00236	UNIT	
13	6180	WIPE UP SPILLED OIL	.00199	UNIT	

VT-299 * .16876 HRS PER UNIT

VT-300 SERVICE FURNACE FIREBOX AND FLUE

NO	REFERENCE	WORK UNIT DESCRIPTION	HOURS	UNITS	V38
1	3842	WALK AROUND WORK AREA	.03000	JOB	
2	3862	OBTAIN AND ASIDE SMALL HAND TOOL	.00684	JOB	
3	2901	OBTAIN AND ASIDE WIPING CLOTH	.00320	JOB	
4	PWMU-1-8000	REMOVE AND INSTALL SCREW (ACCESS PANEL)	.03560	JOB	
5	PWMU-1-8012	LIFT OFF ACCESS PANEL AND PLACE PANEL IN POSITION	.01780	JOB	
6	PWMU-1-8000	REMOVE AND INSTALL NUT (FIREBOX PORT COVER)	.03560	JOB	
7	PWMU-1-8011	REMOVE AND INSTALL FLUE CLEAN-OUT COVER, 8 INCH DIA., FRICTION FIT	.07320	JOB	
8	5862	ATTACH AND REMOVE VACUUM CLEANER HOSE	.00494	JOB	
9	0957	CONNECT AND DISCONNECT VACUUM CLEANER ELECTRICAL CORD	.01186	JOB	
10	3240	LOOSEN ATTACHED RESIDUE IN FLUE WITH SCRAPER	.00819	JOB	
11	2939	SCOOP OUT AMASSED MATERIAL IN FLUE	.00498	JOB	
12	3912	START AND STOP VACUUM CLEANER	.01552	JOB	
13	5170	VACUUM OUT REMAINDER OF LOOSE RESIDUE IN FLUE	.01983	JOB	
14	3240	LOOSEN ATTACHED RESIDUE IN FIREBOX WITH SCRAPER	.01636	JOB	
15	2938	SCOOP OUT AMASSED MATERIAL IN FIREBOX	.01644	JOB	
16	5169	VACUUM OUT REMAINDER OF LOOSE MATERIAL IN FIREBOX	.08592	JOB	
17	1134	CLEAN PORT COVERS	.00992	JOB	
18	2404	CUT ASBESTOS ROPE TO LENGTH FOR FIREBOX PORT COVER GASKET	.00018	JOB	
19	0127	FIT FIREBOX PORT COVER GASKET	.00130	JOB	
20	3231	WIPE HAND TOOL WITH CLOTH	.01236	JOB	

VT-300 * .41183 HRS PER JOB

VT-301 SERVICE FURNACE STACK SWITCH

NO	REFERENCE	WORK UNIT DESCRIPTION	HOURS	UNITS	V38
1	3862	OBTAIN AND ASIDE SMALL HAND TOOL	.00456	SWITCH	
2	2901	OBTAIN AND ASIDE WIPING CLOTH	.00416	SWITCH	
3	PWMU-1-8000	REMOVE AND INSTALL SCREW (STACK SWITCH COVER)	.01780	SWITCH	
4	6192	REMOVE AND INSTALL STACK SWITCH COVER	.00118	SWITCH	
5	4200	CHECK MOVEMENT OF RELAY MANUALLY	.01000	SWITCH	
6	2590	INSPECT CONTACTS, WIRING, CONNECTIONS AND RELAYS FOR UNSATISFACTORY CONDITIONS	.01415	SWITCH	
7	PWMU-1-8006	LOOSEN AND TIGHTEN STACK SWITCH MOUNTING SCREW	.01340	SWITCH	
8	3294	REMOVE STACK SWITCH FROM MOUNTING	.00057	SWITCH	
9	1134	CLEAN SENSING ELEMENT WITH WIRE BRUSH	.00476	SWITCH	
10	2581	INSPECT SENSING ELEMENT FOR UNSATISFACTORY CONDITION	.00928	SWITCH	
11	3286	INSTALL SWITCH IN MOUNTING	.00119	SWITCH	
12	3231	WIPE TOOLS WITH CLOTH	.00824	SWITCH	

VT-301 * .08928 HRS PER SWITCH

VT-302 SERVICE AIR CIRCULATION FAN AND MOTOR

NO	REFERENCE	WORK UNIT DESCRIPTION	HOURS	UNITS	V38
1	3842	WALK AROUND WORK AREA	.00600	JOB	
2	3862	OBTAIN AND ASIDE SMALL HAND TOOL	.00684	JOB	
3	2901	OBTAIN AND ASIDE WIPING CLOTH	.00312	JOB	
4	PWMU-1-8383	TURN FURNACE SWITCH OFF AND ON	.04230	JOB	
5	1137	UNLATCH AND LATCH ACCESS PANEL	.00102	JOB	
6	PWMU-1-8012	REMOVE AND INSTALL ACCESS PANEL (NO FASTENERS)	.01780	JOB	
7	2581	VISUALLY INSPECT INTERIOR OF CABINET, FAN, FAN MOTOR, ETC.	.00464	JOB	
8	1127	ROTATE FAN AND MOTOR BY HAND AND CHECK CONDITION OF BELT	.01770	JOB	
9	PWMU-1-8440	INSPECT, CLEAN, LUBRICATE AND ADJUST FAN MOTOR	.04810	JOB	
10	3152	LUBRICATE FAN BEARINGS	.00234	JOB	
11	2605	CHECK CONDITION OF FAN BEARING	.01906	JOB	
12	3226	WIPE DOWN CABINET INTERIOR WITH CLOTH	.04064	JOB	

VT-302 * .20958 HRS PER JOB

VT-303 CONDUCT FURNACE OPERATIONAL CHECK

NO	REFERENCE	WORK UNIT DESCRIPTION	HOURS	UNITS	V38
1	3842	WALK AROUND WORK AREA	.00450	CHECK	
2	3862	OBTAIN AND ASIDE SMALL HAND TOOL	.00456	CHECK	
3	2090	OPEN AND CLOSE FUEL OIL SHUT OFF VALVE	.00630	CHECK	
4	PWMU-1-8383	TURN FURNACE SWITCH/CIRCUIT BREAKER OFF AND ON	.02820	CHECK	
5	PWMU-1-8006	LOOSEN AND TIGHTEN STACK SWITCH SET SCREW	.01340	CHECK	
6	3234	REMOVE STACK SWITCH FROM MOUNTING	.00057	CHECK	
7	3286	INSTALL STACK SWITCH IN MOUNTING	.00119	CHECK	
8	2601	OBSERVE FLAME FOR PROPER BURN	.00940	CHECK	
9	5604	ADJUST FLAME	.01775	CHECK	
10	3955	INSURE STACK SWITCH CYCLES FURNACE WITHIN PROPER TIME FRAME	.02500	CHECK	
11	2342	RESET STACK SWITCH (PUSH BUTTON)	.00034	CHECK	

VT-303 * .11021 HRS PER CHECK

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EPS Feedback sheet.

The following questions are designed to assist the NAVFAC Industrial Engineering Center in its continuing effort to improve the overall quality of standard data presented in the EPS handbooks.

1. List frequently recurring tasks which are not presently covered:

CRAFT HANDBOOK	TASK DESCRIPTION
_____	_____
_____	_____
_____	_____

2. List tasks presently covered which are never used:

CRAFT HANDBOOK	TASK DESCRIPTION
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_____	_____
_____	_____

3. List tasks for which, in your judgment, craft time is inaccurate - indicate whether too high or too low:

CRAFT HANDBOOK	TASK DESCRIPTION	HIGH/LOW
_____	_____	_____
_____	_____	_____
_____	_____	_____

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